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ABSTRACT

This book looks at the essential dynamics of language contact and linguistic assimilation from a current sociolinguistic perspective by focusing on the English of second generation Puerto Rican teen-agers in New York City. General sociolinguistic principles are extrapolated from the author's detailed investigation of several linguistic variables (th, syllable-final alveolar stops, negation) within the context of three competing influences on the subjects' speech: the standard English of mainstream society, the Puerto Rican Spanish spoken at home, and the vernacular Black English of the surrounding indigenous community. (AG)

ED 091933

SOCIOLINGUISTIC ASPECTS OF ASSIMILATION

PUERTO RICAN ENGLISH IN NEW YORK CITY

WALT WOLFRAM

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INTRODUCTION TO THE SERIES

The Urban Language Series is intended to make available the results of recent sociolinguistic research concerned with the position and role of language in a large metropolitan area. The series includes descriptions of certain aspects of urban language, particularly English, as well as theoretical considerations relevant to such descriptions. The series also includes studies dealing with fieldwork techniques, matters of pedagogy and relationships of urban language study to other disciplines. Where appropriate and feasible, accompanying tape recordings will be made available. Specifically excluded from consideration are aspects of English as a second language or second language learning in general.

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Although the value of focussed attention on the special problems of urban language has been recognized for some time, relatively few substantial studies have been published. To a certain degree, this series represents a pioneering venture on the part of the Center for Applied Linguistics.

Roger W. Shuy
Center for Applied Linguistics

SOCIOLINGUISTIC ASPECTS OF ASSIMILATION

PREFACE

During the past decade, there has been a growing interest in the study of language in its social context. This interest has been stimulated by concerns on two different levels. On a theoretical level, it has become apparent to some that language, which is ultimately a social phenomenon, cannot be properly understood unless its social context is considered. From this perspective, it appears that many theoretical problems in linguistics cannot be solved unless we look at language variation in society. On a practical level, interest in linguistic diversity has been motivated by an increasing concern for the education of the economically impoverished. If we are to seriously undertake the education of socially subordinate groups in our society, we must start with an adequate descriptive base of social differences. Some of these differences are, of course, manifested in linguistic diversity. The need for an adequate descriptive understanding of language differences should be apparent to anyone who deals with language in education.

Both of these concerns have motivated the study reported here, although admittedly there is an emphasis on the theoretical. On this level, we want to examine the implications of a particular language situation to understand the nature of patterned variation. Ultimately, we want to see how this situation sheds light on fundamental issues in linguistics. On a practical level, we want to provide a descriptive base for understanding the language assimilation patterns of the children of immigrants, in this case the children of parents who have migrated from Puerto Rico. Too many times, this type of situation has been dismissed with statements like "The children of immigrants simply assimilate the English of the surrounding English-speaking community". Although in some cases it is difficult to dispute such a conclusion, this cavalier type of over-simplification and generalization neglects the essential dynamics of language contact and linguistic assimilation, the HOW and WHY of which are of great interest.

The research that led to this book was carried out under Office of Education Grant No. OEG-3-70-0033(508) to the Center for Applied Linguistics in 1970-1971. The aims of this research grant were to determine the relative influence of Black English and Puerto Rican Spanish on the speech of second generation Puerto Rican teen-agers. Many individuals contributed to the original research and the subsequent refinement of the analysis. Dr. Roger W. Shuy initially encouraged me to undertake the project, and he followed up the initial impetus with continued support through each stage. I am indebted to Marie Shiels Djouadi, Elaine Bowman, and Marcia F. Whiteman who all served on the original research team. Parts of Chapter Two are the direct work of Ms. Djouadi, and she has read and commented on every version of this manuscript. Ms. Whiteman was responsible for some of the data extraction, and Ms. Bowman demonstrated her diverse capabilities by undertaking tasks ranging from secretary to fieldworker. Charles-James N. Bailey, Ralph W. Fasold, and Ronald Butters read and commented extensively on the entire manuscript, offering many helpful suggestions. I have further profited from discussions of this work with Paul Anisman, Frank Anshen, Albert H. Marckwardt, William Labov, William K. Riley, Rudolph C. Troike, and Ronald Williams. Despite the many people who showed an interest in this work,

the inadequacies still remaining are of my own doing. Sherry Goldbecker meticulously worked on the format and style, which in my case is an undertaking of considerable magnitude. And Freda Ahearn finished off the task with a careful typing of the manuscript. Her high-quality typing has become legendary at the Center for Applied Linguistics.

Obviously, this study would not have been possible without the informants. For establishing our contacts, we are indebted to Youth Development Incorporated and its director, Jim Vaus. Richard Crow, a YDI staff member at the time of the fieldwork, served as a most valuable source in providing background data on informants. In all too many research projects, everyone is acknowledged except the people who willingly provided the data for research. Our informants in this study cannot be thanked sufficiently. Although they may have been puzzled greatly by the seeming inanity of our probing, they willingly tolerated the intrusion into their everyday world. Although they are referred to only anonymously in this study, our warm associations remain very specific.

Finally, I would like to acknowledge the contribution of my parents, Carl and Johanna Wolfram. It was they who first stimulated my interest in the linguistic assimilation of the children of immigrants. But they did not do so through academic instruction or "window gazing"; they accomplished this by allowing me the opportunity of growing up in this situation as my real world. For providing this opportunity I would like to dedicate this effort to them.

W.W.
Arlington, Va.
October 1973

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1 INTRODUCTION

1.1 The study of Puerto Rican English. Although language variation among English dialects has always been of some linguistic interest, only in recent years has there been extended descriptive concern for social dialects in American society. The study of what we shall here call Puerto Rican English (PRE) is an attempt to expand our descriptive knowledge of American social dialects by applying recent sociolinguistic methods of analysis. When we use the term PRE here, we are referring specifically to the English spoken by second generation Puerto Rican teen-age males living predominantly in East Harlem, New York. Although this may appear to be a rather restricted subset of what the varieties of PRE may include, it is expected that much of the description will have wider application, e.g. to a number of northeastern urban areas, than simply to the specific situation we are describing here. And, of course, many of the sociolinguistic principles brought forth may well have universal application for the study of social dialects.

The study of PRE as another variety of English is essential for a number of reasons. To begin with, it is important for both scientific and applied reasons to have accurate descriptive accounts of a range of social dialects in the United States. Important linguistic and sociolinguistic principles come to the surface from our knowledge of these various social dialects. For example, the discovery of ordered linguistic and social constraints on inherently variable linguistic forms is an essential contribution of recent sociolinguistic studies which is confirmed and expanded in our study.

From an applied viewpoint, we need to know how the various social dialects in the United States are structured if we are going to base our educational strategies on sound descriptive facts; shibboleths about speech and vagueness concerning language diversity cannot serve as a foundation for educational decisions with respect to language. For example, in East Harlem, where black and Puerto Rican school children may have considerable interaction, we need to know to what extent, if any, similar language materials can be used for these two groups. Ma and Herasimchuk (1968) indicate that there appears to be similarity among some of the linguistic characteristics of blacks and Puerto Ricans in New York City, but their reference is only incidental, since it is outside the scope of their study of bilingualism. Labov, et al. (1968), although including the nonstandard English of Puerto Rican speakers in their title, focus only on those characteristics of speech that are common to the black community.

As we shall see in this study, some features normally associated in northern urban areas with Black English have been taken over by second generation PRE speakers, regardless of how extensive their contacts with blacks may be; other characteristics show up only in the speech of those Puerto Ricans who have extensive black contacts; and, of course, there are features that might be derived historically from Spanish, but that must be described synchronically as an integral part of PRE.

We see, then, that the study reported here is an investigation of languages in contact. Some aspects of the structure of PRE can be understood only through a knowledge of various nonstandard dialects of English, while others involve an understanding of Puerto Rican Spanish. Separating the sources from which specific linguistic characteristics of PRE may be derived is, in itself, an important sociolinguistic matter that requires a thorough understanding of the dynamics of language influence.

Although we can account for the occurrence of certain PRE structures by closely investigating the structure of our language sources, this cannot be considered a study of bilingualism, for we are concerned here with only one of the languages spoken by our informants. Nor can it be considered a study of language interference in the strict sense. In the conventional sense, interference is a condition that is dependent on bilingualism (Weinreich 1953:11). But we are not concerned mainly with phenomena that are dependent on bilingualism; rather, we are concerned with patterns that have become habitualized and established. Perhaps this can be best illustrated by drawing an analogy with English varieties spoken by second and third generation Germans in southeastern Pennsylvania. Our knowledge of German may help us account for the occurrence of some rather divergent dialect variations in southeastern Pennsylvania. But these features are not dependent on the bilingualism of second and third generation Germans; they are features that must be described synchronically as an integral part of the dialect. The distinction between interference and established dialect variations is an important sociolinguistic matter which we shall turn to later in more detail.

Up to now, we have spoken of PRE as if it were some sort of homogeneous entity, but this is, in itself, a matter of considerable sociolinguistic interest. On one level, our informant group of lower-socioeconomic-class, second generation Puerto Rican teen-age males from East Harlem could be considered homogeneous when compared, for example, with a group of middle-class, white teen-age males from a New York suburb. But on another level, there is heterogeneity in our group of informants: Some informants, for example, show quite extensive contacts with black peers, while others have virtually none; some show cultural values that are quite indigenous to lower-socioeconomic-class life-styles, while others express educational and occupational aspirations that indicate considerable motivation for eventually attaining middle-class life-styles. The extent to which linguistic characteristics are common to our PRE informants as a whole, to subgroups, or even uniquely to individuals is a consideration that will be treated specifically in our description of the linguistic variables chosen for this study.

From a linguistic standpoint, we are interested in the nature of language variation as it relates to languages in contact. To begin with, we want to know how linguistic features from various potential sources are integrated into the emerging language variety. In order to observe this, we will investigate several representative variables to see what the constraints on variability are, given the particular language contact situation. In this regard, we follow earlier studies of linguistic variation that incorporate constraints of variability into the formal representation of optional rules. Some of the observed variation is, of course, accounted for by independent linguistic features that favor or prohibit the operation of a particular rule. Other types of influences on variation can be accounted for only by looking at language in the context of society: That is, the description of the sociocultural situation in Chapter Two is essential in understanding the nature of certain types of influences on variation. Finally, we want to understand the general principles of linguistic variation that emerge from this particular language situation. In order to take on significance, data must be seen in some sort of theoretical framework. Ultimately, knowledge is not furthered by simply reporting data. It is the investigation of data in terms of a particular theoretical framework that is responsible for advancing our knowledge about language.

1.2 The selection of informants. The analysis reported here is based on data regarding the speech of 29 Puerto Rican and 15 black teen-age males from East Harlem and the Bronx. Our original contacts with these informants were made possible through the cooperation of Youth Development Incorporated (YDI), a nondenominational, club-like organization with headquarters in East Harlem at the time of our fieldwork during August of 1969.

In addition to public recreational facilities, some remedial educational instruction and nondenominational religious instruction were optionally offered at YDI's headquarters. During the summer months, YDI operated camp facilities at Lake Champion, New York, the site of the fieldwork that serves as the basis for this analysis. At the time of our fieldwork, there were approximately 150 males between the ages of 13 and 18 present: Two-thirds were Puerto Rican and one-third black; there were no non-Puerto Rican whites present at that time.

The decision was made to start by interviewing several informants who had considerable status among their peers in order to facilitate other interviews. It was anticipated that other individuals would recognize that the leaders had been chosen initially, that being asked for an interview would then have some status significance. It was further reasoned that positive reports from informants initially would enhance our chances of obtaining interviews with other informants. Although somewhat of a risk, this procedure proved to be generally quite successful in obtaining informants for interviews. The association of the interviews with peer status was apparently understood by other members. In fact, several peer associates of our original contacts asked if we might talk with them rather than waiting for us to request an interview.

Having established contacts with several of the peer leaders, we then selected informants on the basis of our acquaintance with them through informant contacts, references to other individuals from our initial interviews, recommendations from workers who knew the informants through more extensive, day-to-day interaction, or a combination of these. Informants were obviously not chosen at random; instead, they were selected in order to approximate the racial distribution of the teen-agers served by YDI.

1.3 The interview. The interview was divided into several main areas. First, there was a fairly extensive free conversation section. Our topics for this section were based largely on previous questionnaires adapted to our population of young teen-age males (see Labov 1966a; Labov et al. 1968; Shuy, Wolfram, and Riley 1967; Fasold 1972), while the topics actually discussed were largely determined by the interests of each informant. The general areas covered ranged from games and leisure to gang fights. As a part of the first section, certain questions about group social structure were asked to obtain sociological background information that would help us assess social interactions and roles.

During the second section, involving responses to certain sentence stimuli largely adopted and developed from Fasold (1972), we attempted to elicit specific constructions germane to our analysis of particular nonstandard linguistic features. Responses to some of these stimuli were crucial in arriving at descriptively adequate analyses of certain linguistic features.

Finally, the informants were asked to read several types of materials, including a prose passage, word lists, and minimal word pairs.

The different sections of the interview were always presented in the above sequence in order to move from the informal to the formal aspects of the interview. The interview lasted approximately one hour. (The general outline of the interview is given in Appendix A.)

Prior familiarity with the informants was considered essential in minimizing the unnaturalness of the normal interview situation. Thus, certain interviewers participated in scheduled and unscheduled camp activities before and during the interviewing, permitting interviewers and informants to become acquainted in a more natural situation and encouraging the establishment of rapport between the two groups. For example, the author spent considerable time playing "pick-up" basketball with a number of the informants. This type of activity was evidently significant in establishing rapport, as indicated in several comments made by informants during the course of the interviews:

> When I first saw you play basketball, I thought you was, you know, I thought you played for pro, I thought you was playing pro basketball cause I seen you, you know, shooting all them balls in and see how you can dribble and all, I thought you played pro basketball. (1:8)[1]

> You got a good shot, man, you know, you got that shot, man, one hand shot, you got it nice, see, you time the ball, chu, chu, chu. (31:1)

Interviews were generally conducted in a vacant room in an unused building on the camp grounds. Interviewers introduced informants to the interview by telling them that we wanted to know about some of the things teen-agers from various parts of the country were interested in. We did not necessarily disguise our interest in language but were nonspecific in talking about what aspects of language variety we might be concerned with. Usually, this was sufficient introduction for the informants, since we had established some familiarity prior to the interview, but any questions were answered by honest but nonspecific comments.

Since we were concerned only with the English of our informants, the interviews were conducted almost exclusively in English. Usually, Spanish was used only when referring to some verbal activity in English and its potential Puerto Rican Spanish analogue. For example, in the discussion of "sounding" (the verbal ritual of insulting a person's mother), an informant might comment on a potential analogue for this activity by giving a Spanish example. The use of Spanish in the interview was quite incidental and will not be considered here.

In general, the style of the interview tended to be relatively casual, more casual than the style that was elicited in random samples as reported in Shuy, Wolfram, and Riley (1967), but it was not necessarily in-group. It does not compare with the group style of Labov et al. (1968) for obvious reasons; it does, however, compare more favorably with Labov et al.'s (1968) single interviews than with Wolfram's (1969) and Fasold's (1972), which were conducted by interviewers who had no prior contact with the informants.

In addition, a second set of interviews was conducted in New York City in the spring of 1971. These interviews were limited to those 14 of the original 29 Puerto Rican informants who could be located through various formal and informal contacts. The purpose of the second interview was to obtain more information about the informants' use of Spanish and about peer contacts. No information for linguistic analysis was desired from the second interview, so the questioning was quite direct. (The questionnaire used in the second interview is given in Appendix B.)

NOTE

1. All quotes from informants are referenced by the informant's number and the page of the typescript on which the statement is found.

2 THE SOCIOCULTURAL SETTING

2.1 Cultures in contact. From the point of view of immigration phenomena, it would seem that New York is the most studied city in the United States. For many generations, wave upon immigrant wave has entered the city, adapting its ethnicity to its environs until some sort of assimilation is achieved. Yet, if the newest arrivals to the city are any indication, few in-depth examinations beyond geographical studies of group living patterns and statistical studies of employment patterns have been made of cultural contacts between groups in the slow process of assimilation. In particular, there is a paucity of research on language contacts between groups in the city and on the consequent phenomenon of language assimilation.

Studying dialect contacts involves dealing with groups of people that are in some way different from each other. This difference may be predominantly geographical, e.g. Midwestern Chicago English versus Southern Atlanta English; it can be socioeconomic where geography is a constant, e.g. New York City upper-middle-class English versus New York City working-class English; and it can be both geographical and socioeconomic. Dialects that differ according to geography can also differ according to socioeconomic groups within each dialect. Each point of view is an abstraction based on a collection of differing speech patterns that share a nameable commonality. The distinction between the two groups whose dialect contact we are studying, predominantly second generation

Puerto Ricans and blacks in New York City, is not primarily geographical or socioeconomic, as in other sociolinguistic investigations; instead, it is based on ethnic group membership.

The nomenclature "Puerto Rican" or "black" is an abstraction that is in many ways difficult to define in terms of specific groups. That island-born Puerto Ricans and southern-born blacks represent two different cultures in New York City is obvious. But after a generation or more in the same city, even in the same neighborhood, is it still possible to speak of two different cultural groups and two different dialects? Or has assimilation occurred in the second and third generations? What is the Puerto Rican/black contact situation in the neighborhood, in the schools, etc.? If assimilation does indeed occur, in what direction does it go: Puerto Rican to black or black to Puerto Rican? In other words, what is the dominant culture and, therefore, the dominant dialect?

In order to specify in what way the existence of two different cultural groups and dialects can be presumed, the cultural contact between Puerto Ricans and blacks will be briefly outlined, concentrating on the place of Puerto Ricans in the city and their relation to the blacks. While much of this discussion focuses on the contact of these two groups as they co-exist in Harlem the Puerto Rican culture in New York City must also be studied on its own terms. What is the relation of one generation to another: immigrants to second generation, second to third, etc.? Are there some Puerto Ricans who identify with the black culture more than others, and if so, why?

This background material, gathered from anthropological and sociological works, census material, and participant-observer information provided by the fieldworkers, will then provide a framework for the linguistic discussion that is the principal focus of this study.

2.2 The residential background of informants. Of the 29 Puerto Rican informants, 2 were born in Puerto Rico and migrated to New York as infants; thus, for all practical purposes, they can be treated as second generation informants, since they learned to speak in the United States. There are also two informants who are third generation Puerto Ricans. Of the 15 black informants, 5 have West Indian history: 2 with one parent from the West Indies, 1 with both parents from the West Indies, and 2 with both grandparents from the West Indies. The other black informants have parents or grandparents who migrated from the southern United States.

At the time of the fieldwork, all the informants were residents of New York City, with 34 living in Manhattan and 10 in the Bronx. All but six informants have lived in New York City all their lives, and of these six, only one has not lived most of his life there.

Padilla (1958) notes that when the Puerto Rican first comes to the city, he either resides for a short time with relatives or is aided by them in locating an apartment usually in Spanish Harlem or one of the other centers of Puerto Rican concentration. While the migrants change residence frequently (about four moves per family, according to Lewis 1968:205), they usually remain in the same borough, often in the same neighborhood. This pattern of mobility is illustrated by many of the informants who indicate they have spent most of their lives in the same general neighborhood. Most residence changes indicated by the informants have occurred within Harlem or between the Bronx and Harlem.

For example, Informant 26, a 17-year-old Puerto Rican, has always lived within three blocks of his present location, although he has moved several times. Examples of a change of borough are found more occasionally: Informants 9 and 43 who are brothers used to live with their family in the Bronx and then moved to their present location in the projects at East 125th Street. There is only one example of a family's having made significant moves in the present study: Informant 23 has lived with his family in Manhattan, at two locations in Brooklyn, upstate in Buffalo, in Harlem, and now in the Bronx. A few informants state that they have lived in the same building all their lives.

Perhaps the most revealing geographical grouping is provided in Table 1, which indicates the residence of each informant at the time of the original fieldwork.

2.3 Puerto Rican intragroup contact. In order to see to what extent the Puerto Rican culture in New York City is homogeneous or heterogeneous, it is important to examine the contact situation of Puerto Ricans with blacks and non-Puerto Ricans against a background knowledge of the amount of contact existing between residents of the island and residents of the city, and of the relations existing between first, second, and third generation Puerto Ricans.

There is a certain continuity between the island and the city because not only is there constant migration, depending on the United States economy, but also there is frequent visiting between the two places. Handlin states that unlike previous immigrants, both Puerto Ricans and blacks do not undergo the decisive break experienced by the Europeans:

> The movement of individuals back and forth between the old home and the new never ceased, so that communications were close and the sense of connectedness was never broken. (Handlin 1965:109)

In addition, new migrants usually settle with or near relatives who have preceded them to the United States. In this way,

Table 1. Residence of Puerto Rican and black informants.

Section*		Puerto Rican Informants	Total	Black Informants	Total
HARLEM					
1	110th to 116th St., 2nd to 5th Ave.	5, 14, 19, 20, 22, 26, 28, 29, 33, 44	10		
2	101st to 110th St., 2nd to 5th Ave.	27, 31, 35, 37	4	2, 3, 4, 6, 12, 13, 15, 17, 25, 41	10
3	116th to 125th St., east of Lenox Ave.	9, 10, 18, 32, 42, 43	6	8, 16	2
4	Central Harlem			1, 40	2
BRONX					
5	South of 159th St.	11, 21, 23, 36, 38, 39	6		
6	Crotona Park	7	1	24	1
7	Westchester Ave.	30, 34	2		

*Section numbers refer to the map in Figure 1.

the New York residents, that is, at least the residents of the Puerto Rican neighborhoods, are constantly in contact with the island and its language, even if they are second and third generation Puerto Ricans who have never been there.

As indicated above, many Puerto Ricans form enclaves. According to Lewis (1968:212-13), the fact that they are set apart as being identified with blacks, and are therefore subject to discrimination in jobs, school, and housing (see Section 2.5.3)

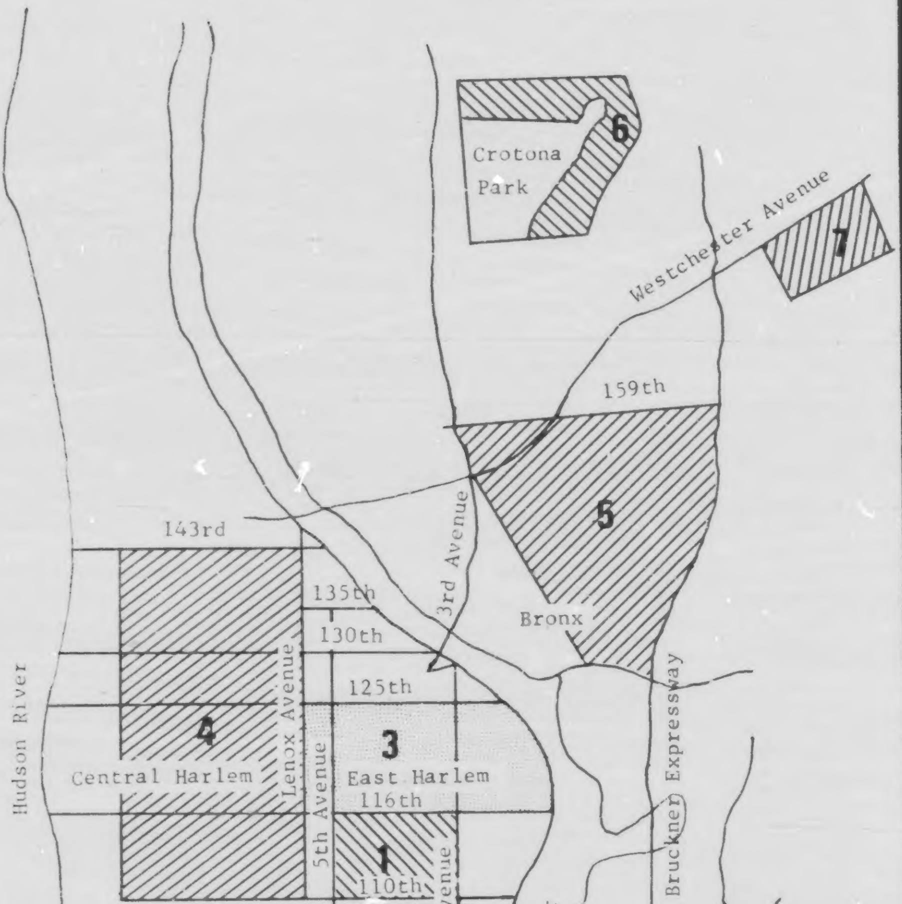

Crotona
Park
6
7
Westchester Avenue
159th
5
3rd Avenue
143rd
135th
130th
Bronx
125th
Lenox Avenue
4
3
Hudson River
Central Harlem
East Harlem
116th
5th Avenue
Bruckner Expressway
1
110th
2nd Avenue
2
East River
101st
Central Park
96th

Figure 1. Geographical location of informants.

has increased their feelings of inferiority. The total effect has been to make them withdraw from the larger society and to activate their sense of nationality and ethnic identity. Because of these factors, Mills, Senior, and Goldsen perceive Puerto Rican culture, at least that of the first generation residents in the core areas of the city, as being fairly homogeneous:

> ...on the whole there is a rather uniform educational achievement, standardized occupation in specific industries and in standardized areas of the city. These factors of institutional concentration which tend to make the migrants of Spanish Harlem and Morrisania homogeneous have more effect than certain other factors which tend to differentiate between them; and the overall result is a leveling of psychological and internal life. (Mills, Senior, and Goldsen 1950:169)

Although the above observation is generally true of first generation immigrants, it is not clear that this uniformity and this Puerto Rican orientation are present in the second generation and beyond. Nahirny and Fishman (1965:318 ff.) elaborate the theory that second generation children of immigrants often tend to throw off their ethnic heritage as a form of rebellion for their being "different" from their American counterparts. However, even while doing this, frequently some form of ethnicity is retained in their very consciousness of being children of immigrants. The children's acute sense of marginality encourages them to become either more American than the Americans themselves or more ardently ethnic than their parents. At least for those who choose the first option, any continuity with the ethnic heritage for the third generation is precluded. For this reason, Nahirny and Fishman (1965:311) hold that "the ethnic heritage, including the ethnic mother tongue, usually ceases to play any viable role in the life of the third generation". Yet, at the same time, they see a reaction on the part of the third generation toward reidentification.

Glazer and Moynihan (1963:v) note a disinclination of the third and fourth generations to "blend into a standard, uniform national type". These authors see the loss of the immigrant language and culture in the first and second generations as making American cultural pluralism impossible; but at the same time that these groups are stripped of direct ethnic influence, they are still identifiable as a group even beyond the second generation:

> Concretely, persons think of themselves as members of that group, with that name; most significantly, they are linked to other members of the group by new attributes that the original immigrants would never have recognized as identifying their group, but which nevertheless serve to make them off, by more than simply name and association, in the third generation and even beyond. (Glazer and Moynihan 1963:13)

While these observations are made more in reference to other immigrant groups, they may be applicable to Puerto Ricans in New York City as well.

Padilla (1958) notes that there is a higher status assigned to those Puerto Ricans who are born and raised in New York than to those born on the island. Most of those born in the United States see themselves not so much as Puerto Ricans, for very often they have never been, nor do they anticipate going, to the island; rather, "They regard themselves as different from their parents and the new migrants" (Padilla 1958:38).

In 1965, Handlin saw two alternatives for the future, depending on color consciousness in the general community:

> If color consciousness grows more intense, the Puerto Rican may be fragmented into three parts. The continuing flow of new arrivals will struggle to maintain themselves as Puerto Ricans. The colored Puerto Ricans already settled, and particularly those of the second and third generations for whom the difference of language fades in importance, will be pressed toward an identification with the more numerous Negroes. And the white majority of the second and third generation Puerto Ricans who lose the consciousness of

> language will find an evergrowing incentive to drop their identification and to merge with some other surrounding ethnic community.... [If, on the other hand, there is a decline in color consciousness] white and colored Puerto Ricans in the awareness of their common identity could develop a coherent community to which newcomers would be added and which would grow stronger through immigration. (Handlin 1965:59)

Given the rise of national awareness generated in black nationalism and reflected in the Young Lords, the second alternative may indeed be becoming more attractive for many Puerto Ricans in New York's core areas (see Hoffman 1968:39).

2.4 Puerto Rican and black contact.

2.4.1 Neighborhood contact. East Harlem is probably the most important Puerto Rican area of New York City. Its geographical boundaries are variously defined by Sexton (1965) and Lewis (1968) as including roughly the area from the East River to Central Park between 96th and 130th Streets, or more precisely the area from 110th to 116th Street between 2nd and 5th Avenues (see Figure 1). To its north and east lie predominantly black neighborhoods, with the poorest section of Harlem, the Triangle, immediately north of Spanish Harlem. Otherwise known as El Barrio, Spanish Harlem is not homogeneously Spanish, as West Indians, Irish, Russians, Hungarians, Italians, and blacks also live there. Sexton (1965:109) characterizes it as being more an economic than a racial ghetto, in contrast to Central Harlem. Despite the fact that sections of Spanish Harlem seem to form enclaves that perpetuate the Spanish language and customs, geographical homogeneity is being replaced by integration, at least on the periphery. Although there are ethnic concentrations, no neighborhood seems to be completely homogeneous.

This lack of complete homogeneity is reflected in the sample for the present study. Almost all of the Puerto Rican informants indicate the presence of some blacks in their neighborhood. How many, however, seems to depend on the geographical location, and, therefore, where the informant lives has a great deal of influence on his black contacts, or if he is black, on his Puerto Rican contacts.

At one end of the continuum, we have Puerto Ricans with relatively restricted neighborhood contacts with blacks:

> Well, down in my neighborhood we got more Puerto Ricans than there is Negroes and Americans cause it's American people, there's only about two or three.... It's a lot of Negroes by the projects towards about two blocks from where I live, and down where I live at is, everybody there is just plain Puerto Rican. (11:10)

At the other end of the continuum are Puerto Ricans with predominantly black neighborhood contacts:

> My brothers, when we first moved in, the only friends we had were Negro, and they were like, they say, we acted all cool with them. They all acted cool with us. (14:7)

That blacks and Puerto Ricans live in the same neighborhood does not necessarily mean, however, that they share extensive contacts. According to Sexton (1965:13), in the old tenement housing these groups do not live in the same building but in adjacent buildings or at opposite ends of the block. One Puerto Rican resident in a predominantly Puerto Rican neighborhood in the Bronx states that his whole apartment building is inhabited by Puerto Ricans, with the exception of one black spouse of a Puerto Rican, although blacks do live on the opposite side of the street. Another resident of the same building adds to the picture of the block:

> No, in my building, only Puerto Ricans live. ...in the city you know we're the only Spanish building in the whole block, in the block, you know, we live in. The rest are Negroes so we stick with them, you know. They make friends with you and you have a lot of friends. (36:7)

Despite the integrated nature of the block, the Puerto Ricans living there name other Puerto Ricans as their best friends.

While much of this discussion deals with the culture contacts of Puerto Ricans and blacks living in Harlem, it is presumed that the situation is similar in those parts of the city that are comparable in terms of socioeconomics or population distribution, e.g. south Bronx or Brooklyn. The Puerto Ricans studied by Lewis (1968:204) in New York City "formed little islands within the city" where their language and many of their customs were perpetuated. Most of their shopping was done in Puerto Rican bodegas, and Spanish was the standard home language. However, many of these subjects were first generation Puerto Ricans, some newly arrived, and length of time in New York City seems to be one of the most important factors in analyzing homogeneity of Puerto Rican contact. Padilla (1958:26) notes three distinct groups of Puerto Ricans in New York City: the recent migrants, the old migrants who have been in New York for a relatively long period of time, and those Puerto Ricans born and reared in New York City. The first group tends to limit its contacts to other Puerto Ricans, preferably relatives and people from the same hometown as well as other Puerto Ricans in the same neighborhood, if not the immediate tenement (Mills, Senior, and Goldsen 1950:99). As these migrants become more acculturated, their way of life and their contacts change. Puerto Ricans born and raised in New York City have more contacts with non-Puerto Ricans at school, at play, and at work (Hoffman 1968:47), although they are rarely out of touch with other Puerto Ricans. However, despite differences in the ways of life and the cultural orientations of these groups, most Puerto Ricans share a feeling of solidarity:

> There are ideals of behavior, standards of values, and rules for living that are considered appropriate to Hispanos, rather than to others, and there are forms of social control--sanctions and standards of

> approval and disapproval--that emerge from the body of ideals of behavior expected from Hispanos. In fact, many cultural diversities and behavioral expectations cluster within subgroups of the larger Hispano groups, and each subgroup is geared to the others as if they were all parts of a system.... (Padilla 1958:48-49)

2.4.2 School contact. The question of school contact seems relatively straightforward. According to Glazer and Moynihan (1963:49), even in 1960 before permissive school zoning was fully established, over half of New York City's Puerto Rican and black children attended "integrated" schools. However, the authors note that this integration is "simply the expression of the existence of the Negro ghetto" in the sense that the school population merely reflects the overall neighborhood population. "Integration" may here be taken to mean the existence of only a few minority group members.

Puerto Ricans are in the majority in the schools attended by most of the informants in the present study, although the schools are thoroughly integrated with blacks who typically comprise at least one-third of the school population. At school, if nowhere else, the Puerto Rican child is exposed to heterogeneity in culture and language. And traditionally, at school, if not at home, the Puerto Rican child begins his "intensive directed training in becoming American" (Padilla 1958:200).

2.5 Solidarity and separation among Puerto Ricans and blacks.

In New York City, Puerto Ricans live as a minority surrounded by a larger minority, blacks. The second generation Puerto Rican, due to his increased exposure to blacks, is in a position to act on his perception of the relationship between the two communities in the establishment of his social relations. Although we might use a number of criteria for classifying Puerto Ricans with respect to their contact with blacks, it is quite clear that the most crucial variable is peer contact. Whom do they associate with in their friendship groups in the neighborhood? They may choose almost exclusively Puerto Rican peers, or they may choose to participate in a group that includes a significant proportion of blacks. In fact, in some cases, the peer group may be predominantly black.

Because of the importance of peer group structure for the investigation of cultural and linguistic assimilation, we have elicited specific information about the peer group structure from each Puerto Rican informant in this study. Each informant was asked to list his main friendship groups and to identify the race of each member of these groups. This information was then compared with observations by staff members who were familiar with the informants over an extended period and with our participant observations of social interactions during the fieldwork. Although there is obviously a continuum with respect to the extent of black contacts revealed by our informants, we have chosen to separate informants into two groups on the basis of our sociological information: those with extensive black contacts and those with restricted black contacts. Those with extensive black contacts indicate a mixture or a majority of blacks among their peers, while those with restricted contacts have few, if any, blacks in their immediate peer groups. The types of group structures, the initiation into peer groups, and the activities of the peer groups all give supportive information for our assessment[1]. Of the 29 Puerto Rican informants, 6 are considered to have extensive black contacts and 23 restricted black contacts on the basis of this information.

2.5.1 Informants' perceptions. A number of writers have noted that Puerto Ricans, particularly second generation Puerto Ricans, may establish close relationships with blacks (Padilla 1958:94). Some of our informants with extensive black contacts reflect this good rapport, as indicated in the following dialogue between a fieldworker and an informant:

> FW: Are colored guys and Spanish guys in the same gang ever?
>
> INF: Yeah. Plenty times.
>
> FW: Do they sometimes have the colored guy against the Spanish?
>
> INF: No. Everybody believes in fun like that.... You grow up, you see a colored guy sitting next to you. (27:13)

Puerto Ricans who have established extensive black contacts tend to minimize differences between the two groups. For example:

> It's really hard to tell between a Puerto Rican and a Negro; it's really hard, you know. (18: second interview)

> You know, like before, it was a lot of race problem in East Harlem, like the community works together, you know, none of this bull-shit about now, you black, get away from me, you're white, you better go to hell or something like that. Ain't like that no more, you know. (5:7)

In reality, of course, there are considerably more differences than are admitted in the above comments. For example, a member of the Puerto Rican community generally would have little difficulty in distinguishing the blacks from the Puerto Ricans. And we know that there are still many tensions that exist between the black and Puerto Rican communities. However, the actual situation is less important than the perception of social relations by Puerto Ricans with extensive black contacts.

There is a commonality between the two groups in that they are set apart by lines of demarcation: the blacks by a color line and the Puerto Ricans by an ethnic line that is equally real.

Although we can observe a certain commonality between groups, the proximity of Puerto Rican and black also may be the cause of intergroup tension. Sexton (1965:13) notes that race and ethnicity underlie much of the open and hidden conflict in East Harlem. This tension can be seen in the statements of some informants from the present study:

> You see, we have half a building full of niggers, guys that really look for trouble. They all came down round about and couple of guys from our building and we have round eight [sic] percent of the guys round here are Spanish. They surrounded the niggers on the outside.... I went straight down and hit couple of them on the head. Now I was at the bottom and when the Spanish finished with the niggers out there, they came in.... They don't fool around with the Spanish cause, what you call it, Spanish take their ass and make it inside out. (43:13-14)

> Like some of these Negro guys, I don't hang around, most of the guys that stick around there, they always, you know, look for trouble. (35:9)

Similar feelings of antipathy are expressed by a number of our Puerto Rican informants. For example, when describing various indigenous forms of behavior that would clearly be considered antisocial in terms of mainstream values, they indicate that such actions are appropriate with respect to their own peer group, while similar types of behavior by blacks are cited pejoratively.

2.5.2 Socioeconomic factors. Generally speaking the Puerto Ricans are on the lowest rung of the socioeconomic ladder in New York City: They have less income as a group than either white non-Puerto Ricans or nonwhites (Motley 1967:21; Kantrowitz and Rappenfort 1966:30). According to Sexton (1965:23), at that time the jobless rate for blacks in Harlem was 50 percent above that for whites, and for Puerto Ricans it was 100 percent above the white norm. And the educational achievement of a Puerto Rican adult, at least among the migrants, is an average of 6.5 years lower than that of any other ethnic group in the city (Lewis 1968:206).

According to most current indices for objectively measuring socioeconomic class, the informants used in this study would be classified as "working" or "lower-working" class. The occupational roles of the heads of households are mainly restricted to operatives, service workers, and laborers. The parents of only two Puerto Rican and two black informants are reported to have occupations that might be classified as professional or semi-professional.

Although we have not made evaluations of all the individual residences of the informants, a survey of the general neighborhoods and an observation of a sample of the projects and tenements in which the informants live indicate that they are quite typical of working- or lower-working-class residences. Many of the residences would clearly be classified as "slum dwellings".

The educational picture of the informants shows somewhat more variation than do the occupations of the heads of household and the housing. Of the 23 informants who responded to our questions about education, 4 (3 of them black) indicate that their parents have had some college training. If these statements can be relied upon, the level of education represented by the household heads seems to be much higher than what we would expect of Harlem and south Bronx residents. It is possible, however, that many of the informants may have overstated the educational levels of their parents.

The school records of the informants (some of which were available to YDI's educational supervisor) generally indicate that their educational achievement is far below the expected norms for their age level. This is true of their reading levels in particular, a fact that was well confirmed when they were asked to read a small passage as part of the interview. Several informants were unable to read even the word lists they were given and would have to be considered functionally illiterate. It is quite clear that the majority of our informants has been alienated from the schools and that their values do not coincide with the middle-class values placed on educational achievement. From the background information given to us by YDI workers, from interviews, and from personal observation, it appears that many informants can be considered integral members of indigenous peer groups, participating fully in the "street culture". There are, however, several informants who must be classified as cultural "lames", i.e. non-members in an indigenous peer group. The school performance of these informants is considerably above that of the other informants, and their value orientation toward education is consonant with the mainstream values placed on educational achievement.

The picture we have painted in the above paragraphs is essentially one of ambivalence. On the one hand, Puerto Ricans may share a feeling of solidarity with blacks because of the minority status of both groups. But on the other hand, tensions may exist because, as we have seen, Puerto Ricans often come below blacks in the "pecking order" of New York City[2], and thus the two groups are in competition for higher status. Puerto Ricans often indicate that they are aware of this competition (Lewis 1968:208), and in many instances, these ambivalent reactions to blacks are expressed by a single individual.

2.5.3 The effect of skin color. Although Puerto Ricans born and raised in New York City have more contact with non-Puerto Ricans than do those who have immigrated from the island, they often consider themselves to be "both Spanish and American, as two unintegrated aspects of themselves" (Padilla 1958:280). The extent to which they perceive themselves as Spanish or American depends on several factors. Among these are the degree of acculturation of their parents, the family's socioeconomic status, and perhaps most significantly, at least outside the family[3], the color of their skin.

In Puerto Rico, discrimination is allegedly rooted more in social class than in color, although it also happens that the least socioeconomically advanced group contains most dark-skinned Puerto Ricans. Thus, Padilla (1958:73,75) explains racial considerations in Puerto Rico as being determined more by appearance than by ancestry, and race is thus reinterpretable depending on advance in income, education, etc. (see Hoffman 1968:37-39).

In terms of physical appearance, Latin Americans "assume the legitimacy of racial identities intermediate to those of white and Negro", while Americans dichotomize into a two-color system, according to Seda-Bonilla (1961:144). For convenience of our discussion of the effect of skin color, Puerto Ricans can be divided into three main categories: white, intermediate, and colored. Traditionally, the terms "white" and "colored" have been used to refer to lighter skinned and darker skinned Puerto Ricans respectively, but no popular classification of the intermediate group is designated. The term "black", which might seem preferable to colored, has a somewhat different cultural reference as it is typically used. In reality, skin color does not function apart from other types of physical characteristics such as hair texture and facial features.

While on the island mulattoes are considered white, and while a larger percentage of white than colored Puerto Ricans migrate to the United States, even these light-colored Puerto Ricans become the target of American discrimination. What the Negro American has long been aware of, i.e. that he is set apart from much of middle-class American society by his color, the Puerto Rican learns upon his arrival in the United States. Puerto Ricans are made extremely sensitive to color distinctions, and the effect "has been to strengthen the character of the identification of the Puerto Rican in the case of those who were colored and to weaken it in the case of those who were white" (Handlin 1965:58-59). Consequently, those of intermediate color are left in a no-man's-land in terms of self-identification in the United States.

Upwardly mobile white Puerto Ricans often seek identification with the white American community as soon as possible (Handlin 1965:58-59) and abandon the ghetto for Washington Heights, areas of the Bronx and Queens (Glazer and Moynihan 1963:111), or areas farther away from the city. As they become more assimilated, they move to nonethnic areas, severing Puerto Rican contacts in an attempt to conceal their Puerto Rican origin.

Seda-Bonilla (1961), in fact, reports that Puerto Ricans living in a white neighborhood admit their Puerto Rican origin hesitantly and only after three or four interviews. The same author also mentions encounters with children in East Harlem who refuse to be identified as Puerto Rican and who deny knowing Spanish. Two brothers (both of whom are quite light) in the present sample are good examples of this attitude. Both deny any knowledge of Spanish, saying they never use it, despite the fact that both their parents are island-born and that they live in a predominantly Puerto Rican environment:

FW: Did you ever speak Spanish at home?
INF: Did I ever? No, ... not that I could remember.
FW: Do your parents speak Spanish?
INF: [after some pressing] Once in a while.
FW: [Do you speak Spanish] with your friends?
INF: Definitely. They speak Spanish to me you know. Go yeah, yeah, I don't know what they're saying.
FW: You don't understand Spanish?
INF: No.... No, I won't speak Spanish.
FW: What do you speak?
INF: I speak English....
FW: With older neighbors?

INF: What about it?... Oh, I can't speak Spanish.

FW: You can't say anything in Spanish?

INF: Well, yes, but.... (9: second interview)

In terms of assimilation, intermediate and colored Puerto Ricans experience the same problems in different degrees. The colored Puerto Ricans are often identified as black by the outside community and indeed, according to Seda-Bonilla (1961:147), "find open acceptance in the American Negro society with credentials of the 'West Indian'". For those who remain in the center of the city, particularly if they are dark and have little possibility of relocating to another neighborhood, the non-Puerto Rican culture to be assimilated to is the black culture:

> ...he must "become like" the Negro in the metropolitan community. The world in which he is to function inconspicuously is the Negro world.... He finds that he can hold only certain jobs, mix socially only with certain people. Almost always he must live in the Harlem ghetto, or in certain Negro sections of the Bronx. (Mills, Senior, and Goldsen 1950:133)

Rand notes the comment of a social worker on the Lower East Side as indicative of this blackward assimilation:

> The Negroes were in New York first and had a head start, but now the Puerto Ricans are copying them. They are borrowing the Negroes' gang structure. Also their jive talk and bop language.... The Negroes are setting the pattern, but the Puerto Ricans are right in there contending with them. (Rand 1958:130-31)

Those colored Puerto Ricans who choose not to be identified with the Negro community must counteract the outside community's appraisal of them as blacks. By emphasizing their Puerto Rican origins they attempt to enhance the distance between themselves and blacks. This emphasis on their Spanishness may be linguistic as well as cultural, so that use of the Spanish language and customs is reinforced. Within the Puerto Rican community, therefore,

> ...a reaction against what is regarded as a social disadvantage has been transformed into a source of family and neighborhood group solidarity which, in turn, serves as a source of emotional strength, reinforcement, and support for the individual. (Padilla 1958:36)

Nonetheless, although they are considered Puerto Ricans (as against blacks) in the Puerto Rican community, they report being treated as the "lowest" within the family, and researchers have found that Puerto Rican drug addicts are usually the darkest members of the family (Sexton 1965:10).

The intermediate Puerto Ricans face more ambiguity, since they are not immediately categorized by outsiders as black and thus have more of an option in choosing their identity. They may choose to be conspicuous as members of a foreign-language-speaking group rather than to be identified with blacks. Those who do accept membership in the American Negro community become completely acculturated to the black society to the point of speaking like blacks, according to Seda-Bonilla (1961:147). This acculturation is reflected in the present study in the speech of those Puerto Ricans with extensive black contacts. They have then only one battle to fight, that of discrimination against blacks, rather than having the double problem of identifying themselves as Puerto Rican and as being distinct from the Negro.

Rand (1958:13) seems to indicate that the Puerto Rican population in Harlem consists of those who are the darker, less European-looking in the New York City population, since they "are the ones who find it hardest to leave the ghettos and be assimilated". No doubt the majority of the Puerto Rican informants in the present study would be classified as intermediate or colored. Although we might hypothesize that the darker informants are more likely to have extensive black contacts than are their intermediate counterparts, our sample does not bear this out. However, this is probably due to the limited sample, and we would expect a larger sample to reveal such a pattern.

What emerges so far is a sketch of the Puerto Rican population of New York City confronted with assimilation alternatives. Coming from a "foreign" culture, speaking a "foreign" language, the Puerto Rican is confronted with racial discrimination reportedly unknown on the island. However, unlike the black whose isolation from white society is more nearly complete, the Puerto Rican has more possibilities for assimilation with the white culture (Broom and Glenn 1965:36).

If he is light and can learn the language, he and his children can become submerged in mainstream America, leaving the black-assimilating and Puerto Rican-oriented groups behind in the center city. But the dark-skinned Puerto Rican faces a conflict in terms of acculturation that is in many respects greater than the black's, for he has the double onus of being both "foreign" and black-like. He is threatened with the discrimination meted out to American blacks, and his mobility is thus restricted, frequently marooning him in the ghettos of Harlem, the Bronx, Brooklyn, etc. (Burma 1954:161); Seda-Bonilla 1961:146-47). He can either try to escape discrimination by emphasizing his membership in the Hispano culture or identify with the blacks and become accepted in some form of American culture.

2.5.4 The use of Spanish[4]. The fact that blacks and Puerto Ricans are forced together geographically and socioeconomically in New York City tends to inhibit ethnic isolation on the part of Puerto Ricans. Not only do both groups share the same physical neighborhood, but they also are exposed to the same media, attend school together, and very often work together.

At the same time, Puerto Ricans are never very far from other Puerto Ricans, so that is is possible to maintain a

Puerto Rican-English ambiance. Part of this ambiance is encouraged by the use of Spanish. Fishman (1968a) analyzes interactions between and within groups in terms of domains. According to Hoffman (1968:26 ff.), "Domains are similar to the sociologist's 'institutions', but are understood in terms of behavior, as well as in terms of structure"; the five domains he suggest for language analysis are home, neighborhood, education, officialdom, and religion. The general rule enunciated by Hoffman is helpful:

> The more one functions within the Puerto Rican value system, the more he would be compelled to speak the language variants required by that system. As a person moves farther away from an exclusively Puerto Rican value orientation his freedom of language choice increases, subject only to the constraints imposed by new value orientations. (Hoffman 1968:41)

Relying on the preceding discussion, it seems safe to generalize that Puerto Ricans in Harlem and other centers of concentration in the city use both English and Spanish; there is no completely monolingual Spanish domain, at least for first and second generation speakers. A Spanish domain is most closely approximated in the home, particularly (1) if the parents speak little English or are fairly new arrivals in the city, or (2) if there is frequent contact with new arrivals from the island. Children of preschool age apparently learn English from their siblings and companions on the street rather than from their parents, and many youngsters who are fluent in English speak Spanish to their parents and older relatives. In the neighborhood both English and Spanish are used, depending on the age and the Puerto Rican orientation of the speaker. The very integration of the neighborhood, its stores, schools, etc., does not encourage Spanish monolingualism.

Hoffman notes that Spanish often unites youngsters "in a common, intimate, emotional bond even while many of them spoke better English than Spanish" (1968:67). Spanish is associated with intimacy and solidarity, hypothesize Greenfield and Fishman (1968:433; see also Padilla 1958:96-97; and Lewis 1968: 207), and it is used with friends and family. This is borne out in the present study: Some informants may use Spanish among Puerto Ricans, but they do not use it when non-Spanish-speaking people are around, unless they want to tease or anger the non-Spanish-speaking.

Typical of a certain group of Puerto Rican informants are those who speak Spanish in the home, but not on the street:

> FW: Do you speak Spanish to the kids in the groups?
>
> INF: No, we don't speak Spanish to each other... only in the house.... When I go outside I talk English only. (34:9-10)
>
> FW: Do any of them [the guys you hang with] speak Spanish?
>
> INF: Ah, we all speak Spanish.... We usually speak English. We just probably speak Spanish to our parents.... They speak English and Spanish but around the house they usually speak Spanish.... It's normal. I mean, nothing wrong with it, just like speaking English. (37:8)

Other informants, however, answer their parents in English, even when the parents address them in Spanish:

> FW: Do you speak to your parents in Spanish?
>
> INF: Huh. They ask, they call, they ask questions to me in Spanish but I answer in English....
>
> FW: Do they want you to learn Spanish?
>
> INF: I already know, but I'm learning how to read and write in Spanish. He teaching me. (33:6)

And for a few informants, despite their Puerto Rican origins, English is spoken at home:

> ...and my mother knows a lot of English. I speak English in the house and my father, too. (36:7)

Part of this reluctance to use Spanish, perhaps even at home, is from the fear of being classified as a "jibaro", a "hick". The following account illustrates this fear and the possibility of overcoming it if the speaker is highly valued enough by his peers:

> ...if I stay out till 11, my mother comes and gets me and then my friends say, couple of friends over there, they say, ah, 'Man, this guy's always speaking Spanish with his mother you know. Boy, he's a hick and a half', you know, and then they start to hate me and I have to get, you know, I say, 'Look, if you don't like the way I speak Spanish, don't stay with me', cause the guys over there, then, they, you know, as soon as they leave me they leave everything, you know. Like if they leave, if they leave to go someplace I bring 'em, need everything from me. (10:10)

The official domain and the work domain are most often English-speaking. The educational domain also includes a predominance of English. English is the language of instruction and, after the first school years, the language of the youngsters at school, even when the school is predominantly Puerto Rican. The ability to speak English is valued. Puerto Ricans born and raised in New York City who speak English sometimes resent being addressed in Spanish and will, on occasion, pretend not to understand when addressed in Spanish. For them,

> ...the knowledge of Spanish conveys no particular sense of accomplishment, nor is it something to boast about. Like non-Puerto Ricans, they regard the constant use of Spanish, as well as any other form of behavior that distinguishes Puerto Ricans from Americans, as detrimental to Puerto Ricans in New York. (Padilla 1958:100)

Are there, however, forces that reinforce the use of Spanish? To some extent, there are people who prefer to maintain their Spanish. As discussed previously, one group consists of intermediates who seek to differentiate themselves from blacks by emphasizing their Hispano origins and language. There also seem to be some immigrant families that simply see being Puerto Rican as a positive value, whether or not they desire to eventually return to the island (Lewis 1968:200-01).

This pride associated with being Spanish and speaking Spanish is seen with one of the present informants:

FW: Do you speak it [Spanish]?

INF: I speak Spanish. I AM Spanish.

FW: Huh?

INF: I am Spanish. (27:9)

Some parents are proud of their Puerto Rican origins and demand that their children speak Spanish:

FW: Do you answer [your parents] in Spanish?

INF: Well, I have to. My father asks me a question in Spanish. He won't take it in English. I have to answer him in Spanish cause he says, ah, ah, 'I'm not an Italian and I'm not a Negro, but I'm a Puerto Rican and have to speak to me in my language....' [He says] 'I was born in Puerto Rico and.... I'm gonna raise you like Puerto Ricans'. So if we speak...English in front of him...it's like cursing right in front of him. (10:9)

To promote the maintenance of their Puerto Ricanness, some parents with this orientation discourage their children from being on the street unless in the company of the family, otherwise demanding that the children spend their off-school hours in the home. These are also the children who are seen alone on the street and who go to school alone, according to Padilla (1958:15). Some of these children remain "upstairs" all during their childhood, while others, as soon as they have learned the ropes, manage to gain acceptance in some sort of youth organization, with or without their parents' approval (Padilla 1958:229).

While it is difficult in one or two interviews to determine the informants' knowledge and use of Spanish, particularly when the interview is conducted in English context, it is nevertheless clear that all of the Puerto Ricans in our study have had more or less extensive contact with Spanish, either in their childhood or from childhood to the present. For a general picture of the use of Spanish by the Puerto Rican informants, four categories of Spanish contact are useful:

I: Knows Spanish and speaks Spanish to family and non-family

II: Knows Spanish and speaks Spanish to family

III: Knows Spanish but does not speak it

IV: Claims not to know Spanish.

Information culled from one or two interviews with 28 of the present 29 Puerto Rican informants,[5] shows that 16 know Spanish and speak it to family and non-family, including neighbors and peers. The frequency with which Spanish is used with peers varies from often to occasionally. Seven informants know Spanish and speak it with one or more members of the family, but claim to speak it rarely outside the family. Three know Spanish but do not speak it at present with any frequency. Two informants deny ability to speak Spanish.

For most of the informants, Spanish is used most frequently in the family with the mother or grandmother, while English is used more often with the father and siblings. While the use of Spanish with family members follows a fairly uniform pattern, Spanish usage outside the family depends on many variables such as situation, age, participants, topic, and so forth. The description of the interaction of these variables, however, is outside the scope of this study, since our primary focus is on the English used by our informants.

Fishman has suggested that the bilingual situation in New York City is diglossic, with functional reinforcement of English and Spanish in differing domains. The maintenance of both languages, seen from this point of view, is hypothesized for a long time to come:

> The 'doom' of Spanish in New York is not about to come to pass and perhaps we now have a bilingual

> group in the City which will simply not go away the way the other language groups did. (Fishman 1971:71)

On the other hand, Cooper and Greenfield hypothesize that the Puerto Ricans

> ...seem to be headed in the same direction as previous immigrant groups in the United States, as they appear to be undergoing displacement of the 'mother' tongue by English in all domains of life.... (Cooper and Greenfield 1968:496)

Since the "choice of a language may in its turn serve as a subtle behavioral index to the direction of acculturation and to the vagaries of social adjustment" (Herman 1961:162), it would seem that the New York City situation would enforce the hypothesis of assimilation: That is, English is used more often by more of the younger people in more situations. Further, it will be shown to include features of assimilation to the dominant dialect surrounding them, i.e. the black dialect. It is expected, however, that a certain differentiation between blacks and Puerto Ricans will be maintained (Glazer and Moynihan 1963:313). The ethnic components are no longer molding together as they did in the nineteenth and early twentieth centuries, according to Handlin (1965). Rather, what is seen is a solidification of ethnic groups, and it is the task of present research to examine "the extent to which a differentiation of interest and orientation is taking place within the ethnic groups themselves and social antecedents to this process" (Doob 1970:532).

2.5.5 The use of Black English. The extent to which Black English is adopted by Puerto Rican teen-agers is East Harlem will be discussed in detail in the following chapters. In a wider sociocultural context, however, we may anticipate our discussion of actual linguistic assimilation by looking at some aspects of the general perception of the language situation on the part of the Puerto Rican groups. How do Puerto Ricans view and react to the linguistic assimilation that is taking place in a broader cultural framework?

To begin with, we have observed that Puerto Ricans with extensive black contacts tend to minimize differences that exist between the two groups. We may thus get informants in this group who deny that the ways in which blacks and Puerto Ricans speak English are different. For some of these informants, there is, of course, a great deal of objective similarity between the varieties of English used by the two groups. But informants who would still perceptually be identified as Puerto Rican may also tend to minimize these differences. The tendency to minimize speech differences that we observe on the part of Puerto Ricans is thus consistent with their perception of the social relations of these groups in a wider context, as noted above.

An interesting assessment of the unity of blacks and Puerto Ricans by members of these groups has been observed in relation to the use of Spanish in peer group situations. Several informants cited the fact that blacks learn to speak Spanish:

> FW: The Negro guys speak Spanish? Do you speak Spanish with one another?
>
> INF: You know, like sometime I say, 'Tu madre es puta', that means 'Your mother's a whore', and the guy says, 'Tu abuela', you know, 'Your grandmother', and jive, and they say, 'Vamos a comer', 'Let's go eat', stuff like that, yea, and they know how to say like, somebody be talking, like two parents be talking, they say, 'Estos niños son tecatos', you know, like 'These kids are junkies', and they go around and they say, 'Hey, man, your mother's over there saying we're junkies, I heard her', something like that. (5:11)

In reality, we find that Spanish usage among blacks in these peer groups is generally restricted to a few phrases or lexical items. One of our black informants gives an illustration of this phenomenon when he is talking about a Puerto Rican who is a member of a predominantly black peer group:

> We say like, 'Eh mira', you know, we talk in Spanish and ask him for a cigarette, 'Dame cigarillo', and he say, 'I don't have none', and he say, 'Look here, man', he make his speech, like if we have a party or something and that guy say, 'Look at that Spanish guy over there', he walk over to him, he say, he make his little speech, he say, 'Listen now, listen to me real good. I may be Spanyola on the outside, but inside I have a Negro heart, you know'. Everybody look at him and say, you know, they start clapping, they say, 'Reuben, say some more', and he be telling all that and then you know, most the time they say, 'What's happening', you know, he consider hisself a nigger, I wouldn't blame him. (1:17)

It is obvious from other comments by Puerto Ricans and from our observations of social interactions that the claim concerning the acquisition of Spanish by blacks is quite exaggerated. The learning of a few fixed phrases is quite different from acquiring language competence in Puerto Rican Spanish.

Statements by Puerto Rican informants also tend to contradict their observations that blacks speak Spanish. In other contexts, Puerto Ricans mention that Spanish is generally avoided around black peers. The reasons for this avoidance are stated succinctly by one Puerto Rican with extensive black peers: He observes that the reason he does not use Spanish with his peers is "So the guy could know that I'm boss, I don't want to hide nothing". For Puerto Ricans to use Spanish with black peers is socially inappropriate since it may be associated with ineptness in cultural adaptation. As illustrated in the previous quote, Puerto Ricans with predominantly black peers have to prove that they belong. The use of Spanish with another Puerto Rican in the peer group would thus be counterproductive to this purpose. Furthermore, the use of

Spanish may be disruptive to a social group for if a black peer does not understand it, he may view it suspiciously. Puerto Ricans who use Spanish around black peers may be suspected of criticizing or attempting to conceal information from their black peers.

If Spanish is not likely to be used around black peers, we may ask why some of the Puerto Ricans make special mention of the fact that blacks speak Spanish. Part of the reason may be related to the tendency of Puerto Ricans with extensive black contacts to minimize differences between the two groups. But we may also hypothesize that there is a desire on the part of these informants to interpret assimilation as reciprocal: That is, not only are Puerto Ricans assimilating aspects of the surrounding black culture, but also blacks are assimilating aspects of Puerto Rican culture.

In reality, this cultural assimilation is largely one-way: It is the Puerto Ricans who are copying the blacks. Black teen-agers do not pick up aspects of Puerto Rican English that might identify them as being Puerto Rican, such as occasional syllable-timing, the tendency not to reduce vowels in unstressed syllables, and so forth; nor do they pick up any real conversational ability in Puerto Rican Spanish. When more integrative aspects of linguistic competence are considered, the few phrases or lexical items learned by some blacks in East Harlem must be considered tokens, indicating a relatively superficial level of borrowing. But these small tokens apparently are interpreted quite symbolically by some Puerto Ricans who desire to see the assimilation process working both ways.

Now let us turn to the Puerto Ricans with restricted black contacts. Unlike the Puerto Ricans with extensive black peer group contacts, they show no tendency to minimize the speech differences between the groups. Therefore, we find informants in this category perceiving blacks and Puerto Ricans as talking quite differently. The following reactions are quite typical:

FW: Is there a difference between the way Puerto Ricans and blacks talk?

INF: Say, like a white person, he will say, 'You try to be cool'. Now a black person will say, 'You all try to be cool'. So there's an accent right there. (39:second interview)

FW: Is there any difference between the way Puerto Ricans and blacks talk?

INF: Yes, there is a big difference. ...Spanish, he'll say, 'Slap me five', but the Negro will come up and say, 'Put some skin on my hand', you know, and he'll use 'man', and he'll say, 'Come on, man, let's go and do our little thing'.

FW: Puerto Ricans don't say that, right?

INF: They say it, but it's different, way different by the way Negroes say it. (43:second interview)

FW: Do you think that black and Puerto Ricans sound any different when they talk?

INF: Yeah, I think the Negro stretches the word.

FW: Give me an example of him stretching the word.

INF: Like when they say 'man', I would say, 'Hey, man, cut it out'. Listening to a Negro, they don't speak like that. They say 'maaan', and it starts moving, you know. They emphasize on the word more. (11:second interview)

This perception of speech differences is consistent with their perception of differences between blacks and Puerto Ricans in East Harlem on a broader cultural level. Despite the fact that the social positions of Puerto Ricans and blacks are quite similar in the wider context of American society, we have already mentioned that there may be considerable intergroup tension. In such a context, it is quite predictable that differences in speech should be brought out to parallel the perception of other social differences.

At this point, we may anticipate our discussion of linguistic assimilation in the following chapters by noting that despite their perception of speech differences, Puerto Ricans with restricted black contacts do show some influence in certain aspects of their speech. We will see, for example, that there is some phonological influence, regardless of the extent of contact. If we had included vocabulary in our study, we would also see that there are a number of indigenous black terms that have been borrowed into the lexicon of both groups of Puerto Ricans. But these similarities are perceived as insignificant when compared with the amount of assimilation revealed by Puerto Ricans with extensive black contacts. In fact, there is evidence that some Puerto Ricans are not conscious of the extent to which black speech may have influenced their own speech. This is vividly illustrated in one incident that occurred following an interview. The informant, never having heard his voice on a tape recorder, asked to play back part of the interview. After listening to his voice for a minute, he worriedly exclaimed to the interviewer, "Man, I sound just like a nigger". The assimilation of Black English may be viewed negatively by Puerto Ricans in this group, despite the fact that they have assimilated aspects of Black English in their own speech.

FW: Do a lotta Spanish kids sound like black kids?

INF: Sometimes....

FW: How about you? Do you think you ever sound like a black when you talk?

INF: I don't know. Do I?

FW: I want your opinion. Do you think you'd like to?

INF: No.

FW: Why not?

INF: I want to talk like I always talk. I don't care if I can talk English, at least I can talk.

FW: Do you think that when a Spanish guy talks like a black guy that makes him sound cool?

INF: Corny.

FW: Does it make him sound tough?

INF: Not tough but corny.

FW: You know some guys who talk that way?

INF: Yeah.... I think they're trying to show off, like, if they got a colored friend, they want to show off in front of him.[8]

The integral adoption of Black English by Puerto Ricans with extensive black contacts may be viewed as an attempt to be something that a Puerto Rican naturally is not, and therefore may be considered pretentious. And even though Puerto Ricans with restricted black contacts may be further removed from traditional Puerto Rican culture than their parents, they may view it as a symbol of the rejection of the Puerto Rican community of which they are still a part.

Any negative reactions toward the assimilation of Black English on the part of the teen-agers with restricted black contacts are clearly reinforced in the home. If parents perceive certain aspects of their children's English to be influenced by black speech, they may react quite negatively. We have already seen that many parents speak to their children in Spanish and require that their children answer them in Spanish. If it is considered inappropriate for children to answer parents in English at all, then the use of a dialect of English that is discernibly influenced by Black English will elicit an even stronger reaction from the parents. One informant explained that a friend who talked like a black was smacked by his father who said, "You can talk English, but normal English". There is considerable evidence that the parents view their children's acquisition of Black English features as quite insulting.

The reactions of Puerto Ricans with restricted black contacts toward the assimilation of Black English can be characterized as basically ambivalent. On the one hand, they are quite aware of the differences that exist between the two groups in a number of areas of culture, and they tend to perceive these differences in speech as in other areas. On the other hand, they are faced with the reality of the social situation in which it is very difficult to avoid some influence from the black community that surrounds them. By perceiving the amount of influence on their own speech as insignificant, they do not have to deal with this limited assimilation while reacting negatively toward the amount of assimilation that takes place among their counterparts with extensive black contacts.

2.6 Summary. Although we have not given a comprehensive ethnographic description in the preceding sections, our brief account of selected aspects of the Puerto Rican community in New York City presents a wider sociocultural framework into which our present linguistic study can be placed. When compared with other reports of East Harlem and with our own background information, it appears that our small sample of Puerto Rican informants represents a fairly "typical" group of second generation teen-age males from the area. We see a range of black contact in the neighborhood and the schools that is well documented in other studies. The conflicting strains of solidarity and separation between Puerto Ricans and blacks present a fairly representative picture of the social dynamics between the two groups. We further observe residency patterns that characterize lower-socioeconomic-class Puerto Ricans in terms of both location and mobility. The concentration of

Puerto Ricans with dark skin also appears to be representative of the area when compared with other segments of the Puerto Rican population in New York City, because of the various assimilation alternatives based on skin color. And from our informants' reports we find that the use of Spanish shows the distribution that we would expect of second generation Puerto Ricans. We conclude, then, that we are describing linguistic characteristics for a group of Puerto Ricans who, in most respects, typify the second generation teen-ager.

NOTES

1. See Wolfram (1971:252-376) for details concerning some of the activities of the various groups of Puerto Rican informants.

2. Despite the objective facts concerning educational and economic status, most Puerto Ricans do not consider the personal prejudice against them to be nearly as intense as it is against blacks. Thus, one informant, after describing a discriminatory incident toward himself as a Puerto Rican in a Bronx park, was asked whether the same would have happened had there been blacks present:

   INF: Oh, man, if Negroes go in, I think they'll shoot them.

   FW: Are you better off than Negroes in this respect?

   INF: Yeah. They're treated much worse. (34:10)

   The institutional discrimination against Puerto Ricans may match or exceed that against blacks in American society, but the feelings of personal prejudice are not perceived to be as intense.

3. The contrast between family acceptance and societal acceptance is well documented in Thomas (1967).

4. More specific information on Spanish-English usage can be found in Fishman et al. (1968). With respect to the

informants in this study, more detail is given concerning their use of Spanish in Shiels (1972).

5. Informant 31 must be omitted from the present discussion since no information on his use of Spanish was available.

6. This quote is excerpted from a supplemental series of interviews on PRE by Paul Anisman. I am grateful to him for bringing it to my attention.

3 LINGUISTIC VARIABILITY

Perhaps the most significant contribution of sociolinguistic studies in the last few years has been the discovery that various social dialects in the United States are differentiated from each other not only by discrete sets of features but also by variations in the frequencies with which certain features or rules occur. Studies of social dialects in the United States in the mid and late 1960's clearly indicate that differentiation of dialects cannot be indicated by simple categorical statements; instead, dialects are, more typically, quantitatively distinguished. Furthermore, many instances of fluctuation in the usage of socially diagnostic linguistic features have been found to be the result of "inherent variability" rather than dialect borrowing or mixture. Labov's study of the social stratification of English in New York City (1966a); Shuy, Wolfram, and Riley's sociolinguistic study in Detroit (1968); Labov et al.'s treatment of Black English in New York City (1968); Wolfram's investigation of sociolinguistic differences in the Detroit black population (1969); and Fasold's account of black working-class speech in Washington, D.C. (1972), all indicate the essential variable parameter in the study of social dialects in the United States.

3.1 The linguistic variable. The study of linguistic variables rather than only categorical constants adds a new dimention to the examination of speech differences, namely, the quantitative measurement of variable speech forms. Earlier studies (Fischer 1958; Labov 1966a; Wolfram 1969) indicate that as quantitative methods are utilized, correlations between linguistic and social patterns emerge. These treatments are done largely within the framework of what Labov called the "linguistic variable". The linguistic variable, itself an abstraction, is realized in actual speech behavior by variants, that is, individual members of a class of variants constituting the variable. Labov noted:

> Whereas the linguistic *variant* is a particular item--a morph or a phone--the *variable* is a class of variants which are ordered along a continuous dimension and whose position is determined by an independent linguistic or extra-linguistic variable. (Labov 1966b:15)

The formulation of the linguistic variable has been established in sociolinguistic descriptions as the unit that serves as a basis for correlating linguistic variation with extra-linguistic factors. Variants or categories of variants are distinguished with reference to their potential correlation with social factors. For example, Wolfram (1969:83) divides the morpheme-medial and -final *θ* variable into four categories of variants:

Category	Phonetic Realizations	Examples	
θ	[θ] [tθ]	[t^{h}uθ] ~ [t^{h}utθ]	'tooth'
		[nəθɨŋ]	'nothing'
f	[f]	[t^{h}uf]	'tooth'
		[nəfɨn]	'nothing'
t	[t˺] [ʔ] [t̆]	[nət˺n̩] ~ [nə^{ʔ}n̩]	'nothing'
		[wɪt̆ɨm]	'with 'em'
Ø		[wɪ#mi]	'with me'
		[nəɨn]	'nothing'

The particular value of a given linguistic variable is viewed as a function of its correlation with extra-linguistic variables and with independent linguistic variables. For example, in the study referred to above, the value of each linguistic variable is viewed as a function of its correlation with socioeconomic class, racial isolation, age, sex, and contextual style.

The quantitative measurement of linguistic variables necessarily involves counting variants. Although this may appear, at first glance, to be a simple procedure, sometimes even the simplest type of counting raises a number of subtle problems. In fact, Labov et al. have gone so far as to note that "the final decision as to what to count is actually the final solution to the problem at hand" (Labov et al. 1968:14). In the first place, it is necessary to delimit the number of variants that can be identified reliably and to select relevant categories of variants for tabulation. For example, in the above categorization, it is noted that [θ] and [tθ] are members of one category, and that [t̚], [ʔ], and [t̆] are members of another. In some cases, the classification of variants is based on a decision as to which distinctions are socially relevant for tabulation. Thus, we have decided that the distinctions between [t̚], [ʔ], and [t̆] are not socially important in the delimitation of the morpheme-medial and -final th variable.

It is also important to identify the total population of utterances in which an item may "potentially" vary. For example, in Labov's (1969) discussion of copula absence, he notes that there are certain types of syntactic constructions, e.g. clause-final position, in which copula contraction of the type He's ugly or You're nice is not permissible in standard or nonstandard dialects; instead, a full form of the copula must be present, e.g. I know he is. In other environments, standard English may use the contracted form of the copula while some nonstandard dialects may fluctuate between the contracted form and copula absence, e.g. He's ugly~He ugly. To get an accurate account of variation, it is necessary to separate these various types of environments, eliminating those contexts in which copula presence is categorical.

Further, it is necessary to identify and classify relevant linguistic environments (phonological, grammatical, and semantic) that may affect the variation of items. In this procedure, environments in which distinctions between variants are neutralized for phonetic reasons, must be excluded. Thus, in the tabulation of word-final consonant clusters, it may be necessary to exclude clusters that are immediately followed by a homorganic stop, e.g. test day, since it is sometimes impossible to determine whether the final consonant of the cluster is present or absent. The importance of identifying relevant linguistic environments for quantitative measurement cannot be overestimated.

Once the procedures of quantifying are set forth, relative frequencies of the variant categories are then calculated as they correlate with various social classifications. Thus, we observe the following distribution of variants for the th variable in terms of four social classes of black population, as delimited in Wolfram (1969:84):

Table 2. Comparison of variants for potential θ in morpheme-medial and morpheme-final positions for Detroit blacks.

	%θ	%f	%t	%∅
Upper-middle class	87.9	5.5	6.1	0.6
Lower-middle class	82.6	11.0	5.8	0.6
Upper-working class	40.8	37.9	19.5	1.8
Lower-working class	28.7	44.7	20.0	6.6

In Table 2, we see that the relative frequencies of the four variant types correlate with social class in the Detroit black community. The variant θ is used significantly more frequently by the middle-class groups than by the working-class groups, which use the other three variants more frequently than do the middle-class groups. In this way, we show that the th variable correlates with social class in the Detroit black community.

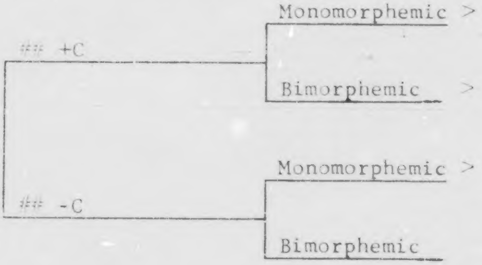
At this point, it is essential to note that the variants of a variable are determined primarily on the basis of sociological (or sociolinguistic, if you will) rather than linguistic categorizations. Thus, we differentiate four variants for the morpheme-medial and -final th variable because we hypothesize that this categorization might reveal relevant contrasts for different social groups of speakers. With respect to the linguistic system, the variants of a linguistic variable might be part of one or more structural units. These variants, or even the subvariants of a variable, might be derived from linguistic rules quite unrelated to each other. The question that this raises is: what relevance does the linguistic variable have to the linguistic rules of a given language or dialect? As originally formulated by Labov (1966b), the linguistic variable was a convenient fiction, having no real theoretical linguistic validity. However, this is not to say that it was useless as a heuristic tool, for it had value in determining the correlation between linguistic and sociological data. As we shall see, it still may be quite useful as a fictional construct for getting at sociolinguistic data. But this methodological usefulness must be clearly distinguished from its theoretical validity for linguistic systems.

3.2 Variable rules. Traditionally, language grammars did not concern themselves with the notion of variability beyond indicating that some rules were posited as obligatory and others as optional. The fact that a particular optional rule might apply more frequently in one context (linguistic or social) was considered irrelevant in the formulation of rules for any given language or dialect. If a grammarian observed that the degree of fluctuation varied more in certain contexts than in others (and Labov (1971) has collected a number of examples to demonstrate that this type of observation was made), it was dismissed as incidental information: That is, it had no relation to actual rule formulation. Degree of optionality was simply not considered within the province of linguistic description of language competence. Detailed studies of variability, however, have indicated that there is a systematic regularity to much of this variation. In part, this regularity can be attributed to extra-linguistic factors such as socioeconomic class, style, age, sex, and so forth. But it has also been demonstrated (particularly in Labov et al. (1968) and Wolfram (1969) that variability can be correlated with independent linguistic variables such as phonological or syntactical environment. The effect of linguistic constraints on variability is quite striking in its regularity. For example, take the case of word-final consonant clusters in which the final member of the cluster is a stop and both members have the same voicing specification. In a number of varieties of English, the final stop member of the cluster can be deleted. According to the rule, *desk* may be pronounced as [dɛs] and *hand* as [hæn]. This deletion rule may operate not only on monomorphemic clusters, i.e. clusters in which both members are part of the same morpheme, but also on bimorphemic clusters, i.e. clusters in which the members are part of two different morphemes. This means that words such as *messed* or *fanned* may be pronounced as [mɛs] and [fæn] respectively. But the extent of deletion is not equal for the two types of items. For all groups for which this variable has been studied, it is observed that deletion is more frequent in monomorphemic clusters than it is in bimorphemic ones. In addition to this constraint, it has also been noted that the cluster is deleted more frequently when it is followed by a word beginning with a consonant than when it is followed by a vowel or a pause. The relative effect of these two environments can be seen in Table 3, taken from Wolfram's (1969) data and arranged by Fasold (1970). The frequencies are tabulated for four different social groups of blacks in Detroit. The single hatch (#) indicates an internal word boundary; the double hatch (##) indicates an external word boundary.

Table 3. Comparison of simplified consonant clusters in the speech of Detroit blacks.

	%C__##C	%C#__##C	%C__##V	%C#__##V
Upper-middle class	.79	.49	.28	.07
Lower-middle class	.87	.62	.43	.13
Upper-working class	.94	.73	.65	.24
Lower-working class	.97	.76	.72	.34

In Table 3, it is readily noted that the same rank order obtains for all four social classes of blacks in Detroit: That is, the most frequent context for consonant cluster simplification is when the cluster is followed by a consonant and is part of a monomorphemic cluster; the next most frequent when it is followed by a consonant and is part of a bimorphemic cluster; the next most frequent when it is followed by a vowel (or a pause) and is part of a monomorphemic cluster; and the least frequent when it is followed by a vowel (or a pause) and is part of a bimorphemic cluster. When we examine the two types of constraints, we notice that they can be ordered according to the principles of geometric ordering. Thus, we have the following array for consonant cluster simplification:



Studies of variable linguistic behavior according to the various constraints have indicated several important observations. First, we note that this type of ordering is quite regular for various social groups. For example, although the actual frequencies in Table 3 differ from social group to social group, the rank orders of the constraints are quite parallel. The types of constraints indicated above have been verified in a number of settings. For example, Labov et al. (1968), Wolfram (1969), Legum et al. (1971), and Fasold (1972) all reveal that both the following environment and the presence or absence of a grammatical marker in the cluster are important constraints on optionality. Frequencies differ from study to study and, in some cases, the ordering of constraints may be different, but the relative effect of these environments is quite regular.

The impressive regularity of these types of constraints on variability is responsible for Labov's (1969) original postulation that optional rules in grammars should be modified in such a way as to allow for the specification of constraints on optionality. Thus, for example, an optional rule may include some kind of specification to indicate the regular and ordered effect of environment on variability. In Labov's original formulation, he uses Greek prescripts to indicate this ordering:[1]

$$X \rightarrow (Y) \,/\, \alpha Z \;\text{——}\; \beta \sim W$$

In the above formulation, there are two constraints on the optionality of the rule that produces Y from X. The first constraint is the preceding Z and the second, the following W. If Z is +, the rule is favored; if it is -, it is inhibited. For W, the ~ indicates that the absence of the feature favors the application of the rule and that its presence inhibits it. According to the principle of geometric ordering, the following rank of constraints on optionality obtains:

+Z -W >
+Z +W >
-Z -W >
-Z +W

The actual frequency of rule application seems to be only incidental to the ordering and is, in essence, a heuristic device for the establishment of the ordering. The frequency levels appear to be a part of performance, but the ordering of constraints is a part of competence that needs to be accounted for in a descriptive grammar. Optional rules that incorporate these features have become known as "variable rules". Whereas the linguistic variable we discussed earlier had no real linguistic significance in terms of the formal representations of a grammar, the variable rule is posited as a formal aspect of linguistic theory to be accounted for in language grammars. Its acceptance on a theoretical level seems to be based on several premises, which we will discuss below.

3.2.1 Inherent variability. The establishment of variable rules is, first of all, based on the assumption of "inherent variability". By inherent variability, we are referring to the fluctuation of variants that cannot be dismissed as dialect borrowing or switching within codes of a speaker's repertoire: That is, the fluctuation is part of a unitary system. One could, of course, theoretically dismiss the notion of inherent variability by assuming that all instances of variation are simply matters of "code switching". From this perspective, if a variant typically associated with language variety X is observed in a person's speech in which features of language variety Y are predominant, it is assumed to be an instance of code switching. The fluctuating variants are assigned to different systems or subsystems within a speaker's linguistic repertoire, and he is seen to be shifting from one code to the other.

We should mention here that switching is typically associated with a SET of features rather than with isolated variants, and that switching usually takes place in response to some stylistic, situational, interlocutor, topic, or other functional shift. On a linguistic level, we would expect some change in the linguistic environment to account for the distribution of variants. What we are faced with, however, is the observation that variation takes place while the extra-linguistic and linguistic context remains quite constant. Variation in a constant extra-linguistic and linguistic context is difficult to dismiss. But even within the most constant of contexts, it can still be claimed that our failure to uncover further conditioning detail to account for shift is only a function of our finite powers of observation. Hence, it may be claimed that the provision of more sociopsychological or linguistic detail would allow us to account for "apparent" fluctuation in terms of a purely categorical framework. Although it may be a heuristically useful procedure to admit inherent variability only after an exhaustive attempt to account for fluctuating variants in categorical terms, our best powers of observation still leave us with inexplicable fluctuation. Ultimately, of course, it is impossible to prove that inherent variability does exist, since we are always subject to our finite observations. Unable to prove the claim logically, we must resort to the fact that the existing data on fluctuation do not support the categorical explanation. Hence, we assume inherent variability.

If we assume that fluctuation between forms is not simply a matter of code switching between coexistent systems, we are faced with the question of how one can differentiate what may be considered "dialect mixture" or "dialect borrowing", i.e. variant forms that are importations from other dialects, from inherent variability. The distinction between dialect mixture (assuming that this notion is also accepted) and inherent variability may be of particular importance for the investigator of languages in contact, whether on an interlanguage or intralanguage level. Students of interlanguage contact situations may maintain, for example, that it is possible for a speaker of L_1 to borrow a form from L_2 without integrating it completely into the system of L_2. Isn't it, for example, quite possible for a speaker of English to borrow a term from German following the morpheme structure sequence rules of German even if they "violate" the English morpheme structure rules? By the same token, investigators of nonstandard language varieties have been confronted with this issue because of the effect that a superordinate variety may have on a subordinate one. Are not some of the fluctuating items used by speakers of the subordinate variety sometimes borrowed from the superordinate one? In some cases, heuristic procedures for differentiating dialect mixture from inherent variability have even been set up[3]. Thus, for example, some linguists, e.g. Labov et al. (1968:164-67, Wolfram (1969:45-47, and Fasold (1972:131), analyzing the sporadic use of -Z third person singular present tense forms, have cited the evidence of structural hypercorrection, frequency levels, and sociological context to show the difference between fluctuating forms that are "borrowed" and those that are "inherent". As attractive as these analyses may appear to be in terms of language contact situations, this distinction is dependent on the observation of both sociological and linguistic phenomena[3]. There appears to be no purely linguistic basis for such a differentiation, as unsatisfying as that may seem to students of language contact.

At this point, one may anticipate the discussion of linguistic constraints on variability and ask if sensitivity to linguistic environment may be used as a linguistic basis for distinguishing inherent variability from dialect mixture: That is, do fluctuating items that are inherently variable show a structured sensitivity to surrounding linguistic environment that is not matched for fluctuating items resulting from dialect mixture? Although it may be tempting to set up such a criterion, it should be cautioned that such a position may not be justified when examined in closer detail. For example, suppose that L_1 does not have any word-final consonant cluster but L_2 does. A speaker of L_1 uses a word from L_2 that ends in a consonant cluster. In some instances, it is observed that the cluster is intact, and in some instances, it is reduced in order to conform to the morpheme structure rules of L_1; this is a very natural expectation in terms of linguistic change of any type. One can predict that the cluster would have a tendency to be reduced more frequently when followed by a vowel than when followed by a consonant for natural phonetic, i.e. universal reasons. Similarly, we can expect the stress patterns to affect the incidence of the variants and to be ordered hierarchically with the following vocalic/nonvocalic environment. On the basis of some exploratory evidence, this is what appears to happen with fluctuating items, whether they are labeled "inherently variable", "borrowed", or "interference". Thus, our attempts to distinguish these notions purely on a formal linguistic basis turn out to be somewhat futile. This does not, however, mean that it is necessarily futile to attempt to distinguish these various concepts at all. A realistic view of the dynamics of language contact would appear to admit such distinctions. But in differentiation, it is essential to understand that the defining characteristics take us beyond linguistic structure *per se*, involving language in the context of society.

We take the position, then, that inherent variability is theoretically and empirically justifiable, and that it can be distinguished from dialect borrowing and code switching. To distinguish between inherent variability and dialect mixture from a synchronic viewpoint does not necessarily mean that current inherent variability is not originally introduced through dialect borrowing. In fact, historically, it appears that much of what we label inherent variability from our synchronic perspective is the result of dialect mixture. Regardless of its historical origin, a synchronic description has to deal with the fact that the fluctuation of items is an intrinsic part of the language system.

3.2.2 *Replicable regularity*. Another premise that lies at the foundation of the theory of variable rules is what we might call "replicable regularity". The step beyond traditional optional rules in a grammar is premised on the systematic patterning of variation. This regularity is demonstrated in the isolation of various linguistic and extra-linguistic contexts that favor or inhibit the operation of a particular optional rule. The constraints on variability are further shown to be ordered with respect to each other, so that a regular hierarchy of constraints can be formalized for a given rule. Although frequency tabulations serve as a basis for determining relationships, most proponents of variable rules relegate the actual figures to the status of a heuristic procedure. The significant relationships are matters of *more* or *less*.

In our previous discussions, we have already alluded to the fact that types of linguistic and nonlinguistic effects on variability are observed to be quite regular for a given individual and a given homogeneous speech community: That is, if we take speakers A and B from language variety X, we will find that the effect and the relative order of the constraints are quite regular in their speech. For example, if we break down one of the groups listed in Table 3 according to individual speakers, we would expect the same ordering of linguistic constraints on variability to hold from speaker to speaker. This is done in Table 4 for the upper-working-class population of Table 3. The frequencies for the four environments distinguished in Table 3 are given for each of the 12 informants who make up this category.

In Table 4, we see the same general pattern of ordering on an individual level that is observed when we calculate the percentages for the group as a whole. There are only two exceptions to this pattern, and we can predict that they would follow the same pattern if we had more examples in the various categories. For most speakers, we are impressed with how few examples are actually needed in order for the general pattern to emerge.

We would also expect that if we take two different samples of speech for each informant, we could duplicate the same pattern that emerges in Table 4. This type of regularity seems to have been established on individual speakers and different homogeneous groups of speakers.

At this point, one may question how stable these patterns are over an extended time period. Some theorists, e.g. Bailey (1973b) and Bickerton (1971), have posited that all variability such as the above is simply an indication of language change in progress: That is, languages essentially move from the categorical use of form X to form Y, and during this progression, there is an interim stage during which X and Y fluctuate.

Table 4. Comparison of simplified consonant clusters in the speech of upper-working-class blacks in Detroit.

Informant	C__##C		C#__##C		C__##V		C#__##V	
	%	(No. Del./Total)	%	(No. Del./Total)	%	(No. Del./Total)	%	(No. Del./Total)
1	.75	(6/8)	.67	(6/9)	.58	(7/12)	.17	(1/6)
2	1.00	(7/7)	.71	(5/7)	.62	(8/13)	.33	(1/3)
3	1.00	(12/12)	.64	(7/11)	.63	(5/8)	.25	(1/4)
4	1.00	(9/9)	.75	(3/4)	.73	(8/11)	1.00	(1/1)
5	1.00	(8/8)	1.00	(9/9)	.83	(10/12)	.33	(2/6)
6	1.00	(6/6)	.67	(6/9)	.64	(9/14)	.17	(1/6)
7	1.00	(8/8)	.67	(8/12)	.67	(8/12)	.00	(0/3)
8	1.00	(8/8)	.55	(6/11)	.58	(7/12)	.50	(2/4)
9	.85	(11/13)	.80	(4/5)	.57	(4/7)	.33	(1/3)
10	1.00	(10/10)	.92	(11/12)	.80	(8/10)	.00	(0/2)
11	.75	(6/8)	.71	(10/14)	.50	(6/12)	.00	(0/1)
12	.90	(9/10)	.77	(10/13)	.70	(7/10)	.00	(0/2)

In the initial stages of language change, X may be variable with Y in certain types of environments, e.g. E_1, while remaining categorical in others, e.g. $E_2 \ldots E_n$. In a next stage, X and Y may fluctuate in all environments. During this stage, environments in which there was earlier fluctuation (E_1) will have a greater incidence of X than environments in which the variable stage occurred later (E_2). In another stage, E_1 may indicate the categorical realization of Y, while E_2 still fluctuates between X and Y. The final result is the categorical realization of Y in all environments. If this is true, and in most instances it appears to be so, the relationships of more and less imply earlier and later changes[4].

Even if one operates under the theoretical assumption that all variability is an indication of language change in progress, this does not negate the validity of variable rule formulation. The fact that optional rules, in the traditional use of the term, may be indicative of changes from one categorical form to another does not mean that they can be dismissed from a descriptively adequate account of an individual's grammar. By the same token, we can claim that variable rules are needed to account for the degree of optionality that we postulate as a part of language competence.

Furthermore, it appears that the language change described above may, in some cases, become stagnant ("stagnant rules"): That is, variability may remain constant for many generations. In this sense, variability may reveal a stability matching that of many categorical rules. In these cases, to say that variability is only an indication of language change in progress appears to be a generalization of no more significance than the sort that we make about language in general--that language is always changing.

Although we may see the time dimension typically applied in more or less relationships, the essential fact that we must account for is the regularity of these relationships. We maintain that this regularity represents the speaker's language competence. When we use the term competence, we are referring to the fact that this knowledge of variability is part of the speaker's capability in terms of how he uses his language. What we are saying, then, is that the speaker knows that some rules are variable and what factors favor such rules. In addition, he has knowledge of the hierarchical order of these constraints. The actual frequency level of application is a manifestation of his knowledge, i.e. performance, but it is not actually a part of his capability.

3.2.3 Language specificity. By themselves, the premises discussed above do not justify the incorporation of constraints on variability into the grammar of a specific language variety. In order for us to justify our formalization of variable rules in the grammar of PRE, for example, we need to demonstrate that there are aspects of variable constraints that are unique to this speech community. If we found that constraints could be predicted on the basis of a universal theory of optional rule constraints, there would be no need to represent them in a specific language. Instead, they could simply be postulated as part of a general language metatheory. This is the position that Kiparsky is endorsing when he says:

> ...if something is universally predictable, it is not learned and can be taken out of the grammar, i.e., it can be made to follow from some general principle about language with a capital L. What I am conjecturing is that Labov's data can be taken out of the grammar of English, the grammar of German, Spanish, etc., and derived from a theory about optional rules in general. (Kiparsky 1971: 645)

Linguists taking this position maintain that, although variable rules may provide important insights for a theory of optional rules in general, it is unnecessarily redundant to include this sort of information for a specific language variety.

There are two aspects to the question of constraint universality. The first may be referred to as "effect predictability" and the second as "order predictability". When we use the term effect predictability, we are referring to the fact that a particular type of environment will always have a particular effect on variability. For example, we may predict that the effect of a following consonant on a consonant cluster will always be to effect reduction, as opposed to the effect of a following vowel or pause. It appears quite plausible to suggest that some of these effect may be universally predictable. For example, syllable structure and distinctiveness of category, which relate to a general theory of markedness in language, may produce such predictability. Such predictability is, of course, based on the assumptions that it is possible to precisely isolate those factors that do affect variability, and that these isolable factors do conform to general principles of naturalness in language. In actuality, some of the constraining factors that have been isolated in studies of variability do not appear to be sufficiently precise, but this may be attributed to incomplete analyses rather than to a violation of this general principle. Moreover, it is assumed that a chance selection of independent linguistic features will not show the same clear-cut pattern of effect predictability as do those conforming to general conditions of naturalness.

The second aspect of constraint universality, order predictability, refers to the specific hierarchical ordering of constraints. For such ordering to be part of our general theory of optional rules, we must be able to predict not only the effect of the constraint but also how it is ordered with respect to other constraints. For example, we would have to posit as universals such statements as: The effect of a following consonant/nonconsonant on deletion will always be greater than that of stress/unstress. It is quite possible to maintain that effect predictability derives from some universal principle of our metatheory of language, but that order predictability is language-specific. This is, of course, an empirical question that can be answered on the basis of a number of studies of variability, and a question to which we will return after we have actually described some aspects of variable speech behavior in PRE.

To sum up our theoretical orientation, the study of PRE is approached from the viewpoint that variability is an integral part of a speaker's competence in his language. In order to account for a speaker's capability in his language, a grammar must be able to include linguistic factors that favor or inhibit the operation of rules. It must also indicate how these factors are ordered with respect to each other. For this study, the frequency of application (either actual or probabilistic) is not considered as a part of his capability. In the account that follows, we will look at several aspects of the PRE phonological and grammatical systems. Rather than study many features superficially, we have chosen to look at a small inventory of features in greater detail. In this way, it is hoped that more general principles of sociolinguistic theory will emerge. Where appropriate, the independent linguistic constraints on variability that we have discussed in this chapter are formalized as a part of our representation of PRE. It is assumed that the reader is familiar with the type of quantification techniques typified in Labov (1966a) or Wolfram (1969), and with the formal representation of variable constraints suggested by Labov et al. (1968), Labov (1969), and Fasold (1970, 1972).

NOTES

1. This use of Greek prescripts is not to be confused with the use of matching Greek prescripts for paired feature specifications in generative phonology.

2. In some instances (Loflin 1970, Fickett 1971), it appears that the operating principle for determining dialect mixture is that any obligatory rule in standard English that would have to be considered optional in Black English is dismissed as dialect mixture. Obviously, such a simplistic approach cannot help but result in a very distorted picture of even the most ideal construct of Black English.

3. DeCamp (1972:87) correctly points out that hypercorrection is a concept that is dependent on both sociological and linguistic facts.

4. Although more and less variable relationships imply earlier and later changes, there are apparently some exceptions to this. For a discussion of such exceptions and their implications for variable rules, see Fasold (1973).

5. Bickerton (1971) has indicated that it is possible to pick out a quite "unlikely" independent linguistic variable and demonstrate that it can be ordered in the geometric hierarchy of constraints in a regular pattern. We would not, however, expect this situation to be typical. My own attempts to isolate different types of variable constraints certainly do not support the observation that this situation is typical. The fact that some constraints may turn out to be invalid on the basis of further investigation does not necessarily reflect any inherent theoretical weakness. At best, it points to a problem of heuristics.

4 THE *TH* VARIABLE

Having presented the sociocultural setting of Puerto Ricans in East Harlem and the linguistic perspective from which we will examine this sociolinguistic situation, we can now turn our attention to some actual speech data. In the following three chapters, we will examine several selected linguistic aspects of the speech of second generation Puerto Ricans. From these descriptive analyses, we will derive general principles that relate to a number of aspects of current sociolinguistics.

Probably the most widely recognized phonological indicators of social status in American English are the interdental fricatives *ð* and *θ*, both of which are represented orthographically by *th*. Although both the voiceless and the voiced interdentals provide for the study of linguistic variability in PRE, we will restrict discussion here to the voiceless fricative *θ*, represented in words such as *think*, *nothing*, and *mouth*. We are dealing here with a phonological feature that, in one way, is common to many nonstandard varieties of English in the United States. But, in another way, this sociolinguistic variable has realizations that in northern urban contexts are generally considered to be unique to Black English speakers. In order to view the different dimensions of this variable and the way in which it patterns, it is necessary to discuss it in terms of the different positional occurrences of potential *θ*, its standard English correlative.

4.1 Morpheme-initial θ. Labov (1966a), in his study of the social stratification of English in New York City, demonstrates that one of the stable sociolinguistic variables for the New York community as a whole is morpheme-initial θ. The types of variants that can be identified tend to be common to several different nonstandard types of American English. The common phonetic realizations identified in this study include:

[θ]	an interdental fricative
[tθ]	an interdental affricate
[t]	an unaspirated (generally lenis dental) stop
[tʰ]	an aspirated stop

In addition to the variants listed above, we have also transcribed several instances in which neither an interdental fricative nor a stop is realized. Instead, we find either s or ∅, i.e. no phonetic realization. It is important to note, however, that all of these examples follow a word ending in a sibilant, as in:

(1) a. [wəz ᵋŋ̣kIn] 'was thinking' (27:9)
b. [nᵋks sᵋŋ̣] 'next thing' (21:12)

We can anticipate our discussion of progressive assimilation in morpheme-final θ by noting that when morpheme-initial θ follows a sibilant, it may be assimilated to the sibilant. In the discussion of the cases of progressive assimilation in Section 4.2.2, it will be observed that all the examples occur within external word boundaries. The few examples that we have here (accounting for less than 10 percent of all potential instances of θ following s) would seem to indicate that this assimilation process may, on occasion, be extended across external word boundaries.

Of the variants listed above, the nonstigmatized variant is θ, but it appears that the affricate is also used to a considerable extent in standard English. Labov et al. (1968:92) consider the affricate to have an "intermediate value" with respect to social stigmatization. In this study, however, we will consider θ and tθ to be submembers of the same variant and will not distinguish between them in our tabulations. This decision is due primarily to our unreliability in transcribing the difference between socially significant affrication and the slight stop onset [^{t}θ] that is almost inevitable before interdental fricatives in certain environments, e.g. following a pause, following a consonant.

The socially stigmatized variants in American English are the stops, both the unaspirated lenis dental stop and the aspirated stop. It is important to note that the phonetic quality of this stop is generally [-tense], distinguishing it from the other voiceless stops that are not derived from underlying /θ/. Labov et al. (1968) have formalized both the affrication and the stop realizations of underlying interdental fricatives variably by the following low-level phonological rule:

$$\begin{bmatrix} \text{+cons} \\ \text{-voc} \\ \text{+diff} \\ \text{-grave} \\ \text{-strid} \end{bmatrix} \rightarrow (\text{[-cont]} \ (\text{[+abr off]})) \ / \ \# \ [\alpha \ \overline{\text{voiced}}]^{2}$$

> This rule converts the non-strident apical fricatives /θ/ and /ð/ to affricates [-cont], with one input variable, and as a second option with another input variable, to the corresponding lenis [-tense] stops. The feature [+ abrupt offset] seems appropriate here, since we are dealing with mellow affricates which are not continuants, but do not have the abrupt offset characteristic of stops. It is the addition of this feature that converts an affricate into a stop, which is defined by an abrupt onset and offset. (Labov et al. 1968:99)

One will note that in this formalization of the affricate aspect of the rule by Labov and his associates, the feature [-continuant] is considered to be a sufficient specification for the derivation of the affricated interdental. Since none of the distinctive feature specifications is adequate to produce this output, the burden is placed on the nondistinctive specifications for the interdentals, i.e. [abrupt offset]. Only the redundant feature specifications can prohibit a stop from being the output. This, of course, presumes that the redundant features are present at this point in the phonological rules.[5]

The second aspect of the rule, as has already been noted, involves the addition of the feature [abrupt offset]. Labov et al. (1968), however, do not describe what they consider to be the exact status of this feature in the phonological description. On the one hand, it may be considered generally to be a nondistinctive feature that becomes distinctive in a specific situation in order to derive the proper phonetic output for the stop realization of this rule. On the other hand, it may be considered to be a distinctive feature that must be incorporated into the distinctive feature matrix of some nonstandard dialects. In essence, this means that a new systematic phoneme that contrasts with other types of alveolar stops is being introduced into the lexical representations. The former alternative, i.e. to allow a nondistinctive feature to become distinctive, appears to be preferable to the latter because of the low-level rule involved and the prevailing redundancy of the feature [abrupt offset] for other types of contrasts in English phonology.

4.1.1 Variant frequency. Having described the variants and how they have been incorporated into the description of the nonstandard dialects in which they are found, we can now look at the actual frequency of the variants. To begin with, we will look at the incidence of the two main categories: (1) the interdental fricative or affricate; (2) the stop, either the aspirated or the unaspirated lenis dental variant. The frequency of the stop variants (both [t^h] and [t] being considered as submembers of the same variant) is given in the following table, comparing the Puerto Rican and black informants. Examples are taken exclusively from the spontaneous conversation section of the interview, but not more than 25 examples are taken from any one informant.

Table 5. Comparison of *t* realization for potential *θ* in morpheme-initial position for Puerto Rican and black informants.

	No. t/Total	% t
Puerto Rican	156/542	28.8
Black	49/222	22.1

Table 5 indicates that the incidence of *t* is higher for the Puerto Rican group as a whole than for the black group. A further breakdown of the *t* variants in terms of the aspirated and unaspirated realizations reveals that the relative incidence of the unaspirated variant is higher for the Puerto Ricans than for the blacks: 63 percent of all *t* occurrences are unaspirated for the Puerto Rican group, as opposed to 49 percent for the black group. This seems to be due to a general pattern of PRE that reflects to some extent the Spanish unaspirated stop realization in initial position.

In Table 5, we looked at the Puerto Rican group as a whole, but it is also possible to look at the range of *t* incidence for individuals within the group.

Figure 2 indicates that there is considerable individual variance in the frequency of *t* occurrence, ranging from over 50 percent to less than 10 percent. For other socially stigmatized variants, we might hypothesize that the relatively high occurrence of the stigmatized variant would correlate with those informants who have extensive contact with blacks. But an investigation of the speakers who show the highest incidence of *t* does not show this to be the case.

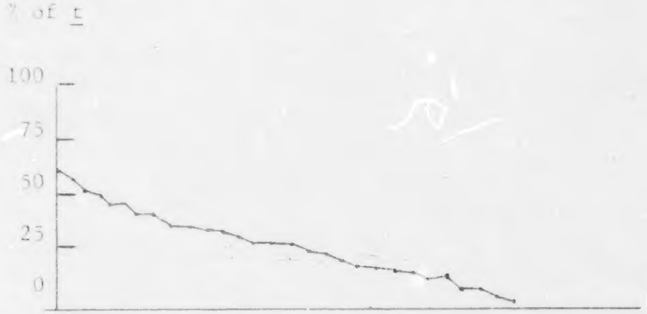


Figure 2. Rank frequency curve of t realization for potential θ in morpheme-initial position for Puerto Rican informants.

4.1.2 Constraints on frequency. Two types of environmental constraints on the incidence of t were examined. First, it was hypothesized that a preceding consonant, as opposed to a preceding vowel, might increase the incidence of t. In Table 6, the figures are given for both the Puerto Rican and the black informant groups in these two environments.

Table 6. Comparison of t realization for potential θ in morpheme-initial position or vowel for Puerto Rican and black informants.

	C##__	V##__
Puerto Rican		
No. t/Total	66/228	88/298
% t	28.9	29.5
Black		
No. t/Total	18/88	33/121
% t	20.5	27.3

We see that our hypothesis concerning the preceding consonant is not confirmed in Table 6, at least not for the Puerto

Ricans: That is, no variable constraint based on the preceding segment is apparent.

The second type of environment was delimited on the basis of the nature of the following segment. In English, the morpheme structure sequence rules allow only one consonant to occur following *θ*, namely, *r*; otherwise, only vowels can occur. In Table 7, we have divided the following context on the basis of the distinction between *r* and a vowel. Only those cases of *r* in which there is actual surface realization of *r* are tabulated. If the phonetic realization indicates postconsonantal *r* absence, it is tabulated as if it were followed by a vowel rather than by *r*.

Table 7. Comparison of *t* realization for potential *θ* in morpheme-initial position based on the following segment for Puerto Rican and black informants.

	__r	__V
Puerto Rican		
No. *t*/Total	59/168	97/374
t	35.1	25.9
Black		
No. *t*/Total	14/48	35/174
t	29.2	20.1

Table 7 indicates that there may be a variable constraint on the incidence of *t* dependent on whether it is followed by *r* or by a vowel. However, the relative difference based on the distinction of following environments does not appear to be as clear-cut as some of the other types of linguistic constraints isolated in the discussion. The application of the Chi square test of statistical significance for the two environments among the Puerto Rican informants indicates that this distinction is significant at the .05 level of confidence. Most clear-cut constraints on variability show a higher confidence level. Nonetheless, it appears that a descriptively adequate account of variation in the interdental fricatives will incorporate this constraint.

We may then incorporate this constraint, along with Labov's previously stated variable constraint based on voicing, into our description of PRE. We conclude that Labov's voicing constraint is the first order constraint and that the following *r* is the second order constraint, since an examination of *đ* → *d* for several informants indicates that the incidence of *d* for potential *đ* is consistently higher than that of *t* for potential *θ*, whether the following segment is a vowel or *r*: That is, *đ* → *d* > *θr* → *tr* > *θV* → *tV*. The constraint of the following *r* applies only to underlying θ, since the morpheme structure sequence rules prohibit *r* following underlying đ. The distinctive feature specifications from Chomsky and Halle (1968) will be adopted in our restatement here (and with other rules), rather than retaining the distinctive features from earlier versions of generative phonology[4].

(2)
$$\begin{bmatrix} +\text{cons} \\ -\text{voc} \\ +\text{cor} \\ +\text{ant} \\ -\text{strid} \end{bmatrix} \rightarrow ([-\text{cont}]\ ([+\text{sim rel}]))\ /\ \#\#\ [A\ \overline{\text{vd}}]\ [B\ \text{cons}]$$

In the formalization given in (2), capital Greek letters are used for variable constraints instead of the small Greek letters used by Labov (1969) or the integers suggested by Fasold (1970). This avoids the ambiguous usage of Greek letters pointed out by Fasold (1970:557), while maintaining the notion of variability conventionally implied by the Greek letters.

In the specification of the following constraint on *t*, it should be noted that it is sufficient to state the environment as consonantal, since the morpheme structure sequence rules automatically eliminate the occurrence of any consonant other than *r*. It is also interesting to note two facts about the phonetic realizations of *t* and *r* in this sequence: First, the overwhelming majority (90 percent) of *t* realizations preceding *r* is unaspirated. Second, the predominant phonetic realization of *r* in this environment is a flap; thus, the usual phonetic realization is:

(3) a. [třu] 'through' (7:4)
b. [tři] 'three' (10:2)

The overwhelming incidence here of the unaspirated variant seems to be due to the flap realization of *r*, since we do not generally get examples of an aspirated variant when the flap occurs, as in (4).

(4) *[tʰřu] 'through'

The aspirated variant tends to occur almost exclusively with nonflap realizations of *r*, as in (5).

(5) [tʰrowIŋ] 'throwing' (26:4)

It seems most reasonable to attribute the overwhelming use of the unaspirated stop and flap to its identity with the common Spanish phonological sequence [tř], as in [třes] or [třagar]. Other nonstandard varieties of English may sometimes use the same [tř] sequence, but one would not expect it to occur with the same relative frequency. (The limited examples from our black informants indicate that it occurs in less than 50 percent of all *tr* clusters derived from θ.)

4.2 *Morpheme-final θ*. The variants that can be isolated for morpheme-final potential *θ* show considerable divergence from the variants discussed in our previous section on morpheme-initial θ. This difference is manifested in both the phonetic realizations and the frequency ratios of the several variants.

In Table 8, the distribution of variants in morpheme-final position is given, excluding the item *with* which will be discussed in Section 4.2.5. The figures, given for the Puerto Rican informants as a group, represent examples taken only from the spontaneous conversation section of the interview.

Table 8. Distribution of variants for potential *θ* in morpheme-final position for Puerto Rican informants.

Variant	Phonetic Realization	No.	% of Total
θ	[θ] [tθ]	56	38.1
f	[f]	64	43.5
t	[t˺] [ʔ] [ť]	4	2.7
Ø	No phonetic realization, assimilated fricative [f] [s] [š]	18	12.2
s	[s] [z] when not followed by a sibilant	5	3.4
Total		147	

As is indicated, the most common variant is *f*, but the incidences of both *θ* and *f* rank considerably above the other variants, accounting for over 80 percent of all cases. Because of the various phonological processes needed to account for the variants, each variant will be discussed individually.

4.2.1 *The incidence of s*. Of the variants that we have delimited above, one that is quite predictable from Puerto Rican Spanish is *s*. A Puerto Rican Spanish speaker learning English will often use *s* as a correspondent for standard English *θ*, so that *tooth* and *both* may be realized as [tus] and [bos] respectively. It would thus appear that those few instances of *s* that cannot be attributed to the assimilation of *θ* to a following fricative (see Section 4.2.2) can be explained as a type of "vestigial interference". We have deliberately used the term vestigial interference to refer to the relative infrequency of interference phenomena that may be expected to occur with some degree of regularity at some stages in the acquisition of another language.

In the case of Puerto Rican Spanish speakers learning English, final θ may commonly be realized as s because of the failure to keep the two rule systems disjunctive. But speakers who have merged systems with respect to this phonological rule may be expected to use s considerably more frequently than the 3.4 percent that is actually observed in our corpus. Presumably, as a speaker acquires genuine competence over the rules of two languages disjunctively, the incidence of s for θ will be reduced accordingly. At the point that it becomes infrequent enough statistically to fall into the range of chance occurrence, i.e. it occurs in less than 5 percent of all potential places in which it might legitimately occur, we may say that, for all practical purposes, the speaker has a disjunctive competence.

However, when occasional lapses indicate incomplete disjunction, it seems appropriate to speak of vestigial interference. Ultimately, of course, the definition of such a concept is a statistical one, relying on the validity of our cutoff point as an indication of rule disjunction between two languages or dialects. What is essential to note here is that our second generation Puerto Rican informants have not as a group established the incidence of s as a correspondent for standard English θ in morpheme-final position. In a statistical idealization of our group, it seems reasonable to dismiss it, since only a small minority of informants uses it at all.

With respect to those informants who show some incidence of s, however, we may raise the question of how habitualized it is in their speech. If we find that there is a substantial frequency of s occurrence for these informants, we may want to postulate that there is one variety of PRE in which s has been incorporated as an integral part of the dialect. But when we look at the four informants who account for the few examples of s, we find that they use it in only 13.5 percent of all potential cases. The relative infrequency of its usage by only a small minority of the Puerto Rican informants would thus appear to justify our categorization of the s variant as a matter of vestigial interference. But this does not necessarily mean that no rule should be posited for those speakers who do use it. An adequate representation of this minority variety of PRE would have to account for the occurrence of s as long as it is realized at a frequency level that cannot be dismissed as incidental.

4.2.2 The incidence of Ø. Unlike the s variant, which we dismissed as outside of the rules that we will need to account for our data in some reasonable way, Ø is realized at a frequency level (12.2 percent) that cannot be dismissed quite as readily. In all but one instance, Ø occurs when followed by a consonant across either an internal or an external word boundary. Thus, it would appear that its incidence, at least when it is followed by a consonant, must be accounted for in the phonological rules we must posit to describe this dialect adequately.

We will not be concerned here with the single rare instance of Ø (less than 5 percent) for potential θ followed by a nonconsonantal environment. Instead, we will concentrate our attention on those instances in which θ is followed by a consonant, in order to determine what it is about the nature of consonants that may cause the surface realization of /θ to be Ø.

In order to understand the increased incidence of Ø realization before words that begin with a consonant, it is necessary to look more closely at the nature of assimilation in both standard English and various nonstandard dialects of English. In casual style, θ may assimilate to the following consonant if it is a voiceless fricative:

(6) a.	[k^{h}ip yɝ ma^o šət][7]	'Keep your mouth shut'
b.	[hi hæz ə ma^o fɝ ɛvri ək^{h}e^{I}žɨn]	'He has a mouth for every occasion'
c.	[hIz t^{h}i sim yɛlə]	'His teeth seem yellow'

Although we have not done a rigorous frequency tabulation, it is quite clear that the assimilation process is more common before the sibilants [s] and [š] than it is before the labiodental fricative [f]. Phonetically this might be expected because of the tongue's involvement with [s] and [š] and its noninvolvement with [f]. We will return to this apparent variable constraint later in our discussion.

In the above examples, only voiceless fricatives are given as the relevant context for effecting assimilation. Voiced fricatives do not effect such assimilation:

(7) a.	*[k^{h}ip yɝ ma^o zIpt]	'Keep your mouth zipped'
b.	*[k^{h}ip yɝ ma^o vɛri stIl]	'Keep your mouth very still'
c.	*[hi hæz ə ma^o θæt muvz ɔl ðə t^{h}a^{e}m]	'He has a mouth that moves all the time'
d.	*[ši hæz ə ma^o ža ža gəbɔr wʊd ɛnvi]	'She has a mouth Zsa Zsa Gabor would envy'

Given the fact that the assimilation does not operate when the following fricative is voiced, the rule just for θ would have to be written as:[8]

$$(8)\quad \theta \rightarrow \left(\begin{bmatrix}\alpha\text{strid}\\ \beta\text{cor}\\ \gamma\text{ant}\end{bmatrix}\right)\ /\ \underline{\qquad\quad}\#\#\ \begin{bmatrix}-\text{voc}\\ +\text{cont}\\ -\text{vd}\\ \alpha\text{strid}\\ \beta\text{cor}\\ \gamma\text{ant}\end{bmatrix}$$

Although θ cannot be assimilated before a voiced fricative, as illustrated in (7), there is a voiceless assimilation rule that may apply to voiced fricatives following a voiceless fricative to make them voiceless. And if this rule applies, changing the underlying voiced fricatives to their voiceless counterparts, θ is then subject to the fricative assimilation rule. Thus, sentences like the following seem to be quite acceptable in an allegro style of standard English:

(9) a. [k^{h}ip yɝ ma^ɔ sɪpt] 'Keep your mouth zipped'
b. [hi hæz ə ma^ɔ θæt go^{U}z ɔl ðə t^{h}a^{e}m] 'He has a mouth that goes all the time'
c. [k^{h}ip yɝ ma^ɔ fɛri stɪl] 'Keep your mouth very still'

The acceptability of sentences like (9) can be best explained in terms of a sequence of two rules: one that assimilates following voiced fricatives to voicelessness when following voiceless fricatives, and Rule (8), discussed above. The voiceless assimilation rule covering fricatives may be written as:

$$(10)\quad \begin{bmatrix} \text{-voc} \\ \text{+cont} \\ \alpha\text{ant} \\ \beta\text{cor} \\ \gamma\text{strid} \end{bmatrix} \rightarrow ([\text{-voice}]) \;/\; \begin{bmatrix} \text{-voc} \\ \text{+cont} \\ \text{-vd} \\ \alpha\text{ant} \\ \beta\text{cor} \\ \gamma\text{strid} \end{bmatrix} \;\#\#\; \underline{\qquad}$$

Presumably, the rule for standard English voiceless assimilation would have to be more general, e.g. to account for assimilation of noncontinuant voiceless consonants, but for our purposes here, we will be satisfied with the less general version.

In addition to the regressive assimilation, i.e. the assimilated sound precedes the conditioning sound, which we have discussed above with reference to θ in standard English, it is important to note one type of progressive assimilation, namely, when θ follows the sibilant s. Thus, the assimilation of θ in an item like sixth must be accounted for by the preceding s:

(11) a. [sIKs $t^{h}a^{e}m$] 'sixth time'

b. [sIKs æpəl] 'sixth apple'

This assimilation must be considered as peculiar to sibilants, since a preceding f assimilates to the θ in standard English, rather than the assimilating θ to f, so that we have:

(12) a. [fIθ $t^{h}a^{e}m$] 'fifth time'

b. [fIθ æpəl] 'fifth apple'

Therefore, we must posit a rule in standard English to account for (11) but not (12):

$$(13)\quad \theta \rightarrow ([+\text{strid}]) \;/\; \begin{bmatrix} -\text{voc} \\ +\text{strid} \\ +\text{cor} \end{bmatrix} \# \;\underline{\qquad}$$

In addition to the frequent application of this progressive sibilant assimilation rule within word boundaries, we have noted in (1) that it occasionally operates across external word boundaries.

Up to this point, it has been implicit that sentences such as (6) are the result of two processes: First, there is an assimilation process that operates to make θ identical to certain fricatives in certain types of environments; then, there is a rule that deletes one of the members in a geminate consonant cluster. Thus, in order to get at the actual surface realization of the sentences in (6), there is a gemination reduction rule that operates on the output of Rule (8). Assuming that this rule is needed elsewhere in the grammar, it might be given informally as:

(14) C → Ø / ___ an identical C

In the ordered sequence of rules, this must obviously follow Rule (8).

What are the reasons, then, for suggesting that the phonetic realizations in (6) are products of assimilation and subsequent deletion of geminate consonants? In justification of our interpretation here, there are several specific observations concerning the data and some general principles of language processes that can be cited. In the first place, there are instances in which some phonetic basis for considering these as the result of assimilation may occur. In some instances, there may be the vestige of a phonetically lengthened fricative. Thus, the sibilant in sixth can sometimes be perceived to be lengthened:

(15) a. [sIKs: t^{h}a^{e}m] 'sixth time'
b. [sIKs: æpəl] 'sixth apple'

This phonetic lengthening fluctuates with the nonlengthened realizations given previously in (11). Thus, Rule (14) is not obligatory. Also, in the case of assimilation across external word boundaries, there are instances in which a perceived onset of the word occurs during the duration of the fricative, so that a careful phonetic transcription of items like mouth shut and ninth street might be:

(16) a. [ma^{ɔ}š 'šəṛ] 'mouth shut'
b. [nə^{e}ns 'strit] 'ninth street'

Although this type of phonetic vestige is admittedly present in only a small minority of cases of allegro style, an assimilation process seems to be the most reasonable way of handling this phenomenon.

In further defense of our interpretation of θ absence as assimilation followed by deletion rather than simply as deletion, we can note the natural differences between assimilation and deletion as language processes. Assimilation tends to be restricted in terms of specific environments in which it can take place. When we look at the above case, we see that the Ø realization for θ is almost exclusively restricted to following fricatives. Because of the natural class relationship of θ to other fricatives, we may expect this to be assimilation within a natural class. But when we look at deletion as a process, we typically find the relevant environments for deletion to be more general. For example, in studies of word-final consonant cluster reduction, e.g. tes' case for test case, we find that deletion is affected to some extent by any obstruent, nasal or lateral, and to some extent by other sounds as well. This is not to say that the delineation of different types of consonantal environments will not show some effect on the variability of reduction, for this is certainly the case in many instances. One does note, however, that the differences in consonantal effect tend to be gradient rather than sharp. Thus, if we look at consonant cluster reduction before words beginning with consonants (Wolfram 1969:62), we note that while all consonants effect reduction to some extent, certain consonants may effect it more than others. This seems to be the way in which deletion processes generally operate.

Assimilation and subsequent deletion as language processes tend to show the mutually exclusive type of distribution that we have observed here. Therefore, even if our claim that there are sequences like (15) and (16) were to be disputed on empirical grounds, we would still be inclined to suggest that the interpretation given above is a natural solution in terms of how we can expect languages to operate.

Finally, phonetic sequences such as θs or sθ appear to involve a transition that may be difficult to maintain for physiological reasons, thus resulting in a tendency toward assimilation. Although this, in itself, may not be the type of formal evidence on which we can base our entire solution, it does tend to reinforce our interpretation as the correct solution to the ∅ realization of θ for standard English.

With our above discussion concerning the nature of θ assimilation in standard English in mind, we can now return to the cases of ∅ realization that we have encountered with our Puerto Rican informants. Is this exactly the same type of phenomenon as that which we observe in standard English, or is it different? To begin with, we note that over 70 percent of all occurrences of potential *θ* before the fricatives *f*, *s*, and *š* are absent; when just sibilants are considered, it is over 90 percent. When we compare these figures with the figures for nonfricative consonants (including obstruents and sonorants), we find the contrast quite apparent: The realization of *Ø* before nonfricative consonants is less than 5 percent. This plainly indicates that the assimilation process that we have observed for standard English is very much operative for this variety of English as well.

The limited instances of *Ø* before nonfricative consonants are given below:

(17)	a.	[ne^{I}mI wəz]	'Namath was'	(14:2)
	b.	[č^{h}ru də]	'truth the'	(23:3)
	c.	[č^{h}ru ma^{e}]	'truth my'	(23:6)
	d.	[ma^{o} wəz]	'mouth was'	(27:12)
	e.	[ma^{o} yɨ no^{U}]	'mouth you know'	(34:7)
	f.	[bo^{U} hæv]	'both have'	(38:3)
	g.	[ne^{I}mI wəz]	'Namath was'	(39:2)

No clear-cut conditioning for *Ø* realization is apparent in the above list. These examples seem to be relatively rare cases of the deletion of *θ* before nonfricative consonants, rather than cases of an extended assimilation process in PRE. With the possible exception of following labials, where 4 of 17 cases of potential *θ* are absent, the rarity of *Ø* before nonfricative consonants does not appear to be an integral part of the phonological processes of the variety(s) of English spoken by our Puerto Rican informants. Even in the case of following labials, however, the paucity of examples does not allow us to make a strong case for a regular phonological process that deletes or assimilates underlying //θ// before *w*.

Our conclusion, then, is that the nonstandard variety(s) of English spoken by our Puerto Rican informants simply shares the assimilation rule for final *θ* that exists for standard and other nonstandard varieties of English. The few examples of *Ø* before nonfricative consonants do not figure prominently in our interpretation, since rare cases of deletion may be matters of performance rather than competence. In standard English, the assimilation rule operates on a segment when it is followed by a fricative or preceded by a sibilant. The same type of constraint appears to operate for this nonstandard dialect in that assimilation occurs with considerably greater frequency when the following morpheme begins with a sibilant, as opposed to a labio-dental fricative.

If we conclude that the frequency difference between labio-dental fricatives and sibilants is to be incorporated into our variable rule, we are faced with an interesting problem concerning the conventions for stating variable rules. Instead of the statement of the rule as in (8), we will need to state the environment disjunctively, specifying *f* as $\begin{bmatrix}-\text{strid}\\ -\text{cor}\\ +\text{ant}\end{bmatrix}$ and *s* and *š* as $\begin{bmatrix}+\text{strid}\\ +\text{cor}\\ \alpha\text{ant}\end{bmatrix}$ if we are to build the variability factor into the rule. Because we must specify the environment for the rule as at least partially disjunctive, we can no longer retain our matching + or - values indicated by the Greek prescripts in Rule (8). Traditionally, the Greek prescripts are used to indicate some matching variable coefficient somewhere in the rule. Now, if we are to retain the generality of the assimilation rule for fricatives, while incorporating our variable constraint for the frequency difference between labio-dentals and sibilants, we can do so only by establishing a slightly different convention for the use of the Greek prescripts under certain conditions. The convention change that we suggest here in order to retain the rule output as originally postulated may be stated as follows:

> If a rule has an environment E with disjunctive subparts E_1 and E_2, where E_1 and E_2 contain opposite signs for the same feature *X* (say, +*X* in E_1 and -*X* in E_2) and the rule specifies that feature *X* in the segment undergoing change assimilates to the value of *X* in E_1 if E_1 is present and to the value of *X* in E_2 if E_2 is present, then feature *X* in the segment to the immediate right of the arrow will be marked with a Greek letter prescript (say, αX) which is to be interpreted as having the value of *X* in E_1 (+*X*) if E_1 is present and the value of *X* in E_2 (-*X*) if E_2 is present.[11]

Adopting this convention change will allow us to state the rule, with the variable constraint for labio-dentals and sibilants, as:

$$(18)\quad \theta \rightarrow \left(\begin{bmatrix} \alpha\text{ant} \\ \beta\text{cor} \\ \gamma\text{strid} \end{bmatrix} \right) / \underline{\qquad\quad} \#\# \begin{bmatrix} -\text{voc} \\ +\text{cont} \\ -\text{vd} \\ \left\{ \begin{matrix} \left(A \begin{bmatrix} \alpha\text{ant} \\ +\text{cor} \\ +\text{strid} \end{bmatrix} \right) \\ \\ \left(\begin{bmatrix} +\text{ant} \\ -\text{cor} \\ -\text{strid} \end{bmatrix} \right) \end{matrix} \right\} \end{bmatrix}$$

In the above convention, the capital Greek letter *A* indicates that *s* and *š* can be expected to undergo the assimilation process more regularly than *f*. It is noted here that the constraint refers to the entire feature matrix rather than simply to one feature. In Labov et al.'s (1968) original formulation, it was used only with reference to single features. However, inasmuch as it is necessary to distinguish certain logically related units by more than one feature, this seems to be an inevitable extension of variable marking.

Before concluding our discussion of *Ø* surface realizations, it is necessary to point out that the assimilation process we have been discussing must operate on underlying θ for those speakers who have the *θ* → *f* rule (see Section 4.2.3) in certain environments. To put it another way, it must be applied before underlying θ has been changed to *f*. This conclusion is based on the fact that this variety, like standard English, does not permit assimilation of *f* to sibilants. Thus, examples like *[læ so] 'laugh so' and *[ɔ so] 'off so' are not found in our corpus, just as they are not typically found in standard English. An examination of the speech of 10 informants indicates that there are no examples of assimilation or loss of underlying /f/ before sibilants. In order to disallow the assimilation of underlying /f/ before sibilants while permitting the assimilation of underlying /θ/, we must apply the assimilation rule to /θ/ before it is changed to *f*. A generative phonological rule can operate only on the output of all previous rules, so that once *θ* becomes *f*, all subsequent rules must operate on all *f*'s, regardless of their derivational history.

4.2.3 *The incidence of f*. Having accounted for the *Ø* surface realizations for potential *θ*, let us now turn our attention to the incidence of *f* realization. Of the socially stigmatized variants, *f* occurs by far the most frequently. In looking at the source for this variant, we must first rule out the matter of language interference from Spanish. As we have seen earlier, for Spanish speakers the expected interference variant for standard English *θ* is generally *s*. But this variant is seen to occur very infrequently. In accounting for *f*, therefore, it is reasonable to turn to the structure of Black English, in which it is the most common correspondent for standard English *θ* in morpheme-final position. The following table compares the incidence of the variants for the Puerto Rican and the black informants:

Table 9. Comparison of variants for potential *θ* in morpheme-final position for Puerto Rican and black informants.

Variant	Puerto Rican		Black	
	No.	% of Total	No.	% of Total
θ	56	38.1	8	16.3
f	64	43.5	36	73.5
t	4	2.7	2	4.1
∅	18	12.2	3	6.1
s	5	3.4	-	-
Total	147		49	

The above table clearly indicates the increased incidence of the *θ* variant when the Puerto Rican group as a whole is compared with the black group.

We can, however, look more closely at the type of distribution that is found for a number of the Puerto Rican informants. In the following rank frequency curve, the relative incidence of *f* for *θ* is shown for the 12 Puerto Rican informants who have at least 5 examples of potential *θ* in their interview (excluding the item *with*).

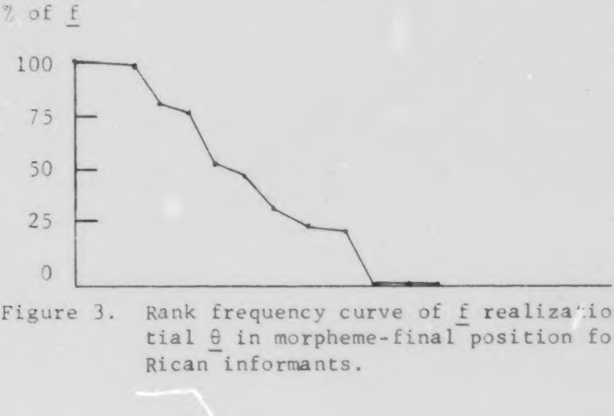


Figure 3. Rank frequency curve of *f* realization for potential *θ* in morpheme-final position for Puerto Rican informants.

Figure 3 indicates a complete range of f frequency among our Puerto Rican informants. At the upper end of the scale are two informants who show the categorical presence of f in morpheme-final position, while at the lower end are three informants who reveal the categorical presence of θ. Because of this distribution, it is instructive to look briefly at the informants who reveal categoricality at either end.

The two informants who show the categorical use of f in morpheme-final position have extensive contacts with blacks. Consideration of the ethnic identity of their peers and our observations of their social contacts all testify to this. On the other hand, the three informants who reveal the categorical presence of θ do not show this type of social interaction. In fact, two of the informants (who are brothers) relate in their interviews that they have little peer contact with blacks. The third informant has a minority of black peers, but he cannot be considered to have the extensive types of contacts that are characteristic of the two informants who reveal the categoricality of f. Thus, looking at the linguistic distribution and the social characteristics of informants who represent the two ends of the linguistic continuum, we are led to hypothesize that the frequency of f is a function of the extent of black contacts because of the integral role of f in Black English. This hypothesis can be tested by comparing 10 black informants (BL), those Puerto Rican informants who have extensive black contacts (PR/BL), and those Puerto Ricans who have limited black contacts (PR).

The distribution of f realization in Table 10 is quite straightforward, and our hypothesis is confirmed. The Puerto Ricans with extensive black contacts match (in fact, they exceed, but not to any significant degree) the extent of f realization found among the black informants, while the Puerto Ricans with limited black contacts reveal significantly less f realization than either of the other groups.

Table 10. Comparison of f realization for potential θ in morpheme-final position for BL, PR/BL, and PR informants.

Informants (No.)	No. f	No. θ	% f
BL (10)	36	8	81.8
PR/BL (6)	20	3	87.0
PR (23)	53	44	54.6

At this point, we must turn to the descriptive account of f as a correspondent of standard English θ in morpheme-final position for those Puerto Rican speakers who reveal this variant. Previous discussion of morpheme-final [f] as a correspondent of standard English [θ] (for Black English) have concluded that some cases of [f] must be derived from underlying /θ/ on the basis that only [f] derived from underlying /θ/ can alternate with [t] in its surface realization. Fasold notes:

> ...we see that there is indeed a contrast between the [f] which matches Standard English [θ], and the [f] which matches Standard English [f]. In certain situations, words with word-final [f] in Black English are pronounced with a [t]. Consider the two sentences:
>
> Get off my bike!
> Come back with my bike!
>
> One possible Black English pronunciation of these sentences is:
>
> [gIt ɔf ma bayk]
> [kəm bæk wIf ma bayk]
>
> In rapid speech, the [f] in 'with' can be pronounced as [t], but not the [f] in 'off':
>
> *[gIt ɔt ma bayk]
> [kəm bæk wIt ma bayk]
>
> It is necessary, then, before the phonological rules apply, to designate which kind of [f] is which. Given the system of English phonology, it can be shown fairly convincingly that the

> appropriate segment to represent the underlying final consonant of 'with' is)θ(, even if it is never so pronounced. (Fasold 1969b:78-79)

Wolfram supports the same position for the identical formal reasons, when he says:

> What is clear, then, is that it is necessary to postulate two underlying sources for the surface realization of [f] in Black English; one of these can be alternately realized as [t] in certain environments, while the other cannot. (Wolfram 1970:9)

Although the alternation of [f] with [t] is part of the formal evidence for the postulation of underlying //θ// in some lexical items, that postulation is still restricted to those examples in which this type of alternation actually occurs. For those forms not revealing this alternation, and these are in the majority, it has been suggested that the generative phonological rule should be written in such a way that only the features shared by *f* and *θ* are specified. This can be stated by the following rule:

(19) $$\begin{bmatrix} -\text{voc} \\ +\text{cont} \\ +\text{ant} \\ -\text{strid} \\ -\text{vd} \end{bmatrix}^{12} \rightarrow ([-\text{cor}]) \; / \; \_\_\_\_\#\#$$

Fasold concludes that:

> The answer to the specification problem is to specify...the fricatives in words in which *t* is observed in allegro speech as *θ*, and to partially specify the fricatives in morpheme-final position in all other words. (Fasold 1967:4-5)

Although the evidence from *t* and *f* alternation is correct, this type of alternation is actually observed in a restricted number of items, e.g. the unstressed preposition *with*, *θ* following a nasal, etc. This leaves the majority of items as unspecified with respect to underlying //f// or //θ// if we look at formal motivation. (Other reasons for considering them all as θ have been given, but these do not hold the same weight as the formal motivation we are talking about here.)

When we look at it more closely, we find that there is another type of alternation that extends the motivation for the full specification of θ in morpheme-final position. This alternation is related to the assimilation of θ when the following segment begins with a sibilant. We have observed that when a morpheme-final θ is followed by a morpheme or a word beginning with a fricative, particularly a sibilant, the θ may assimilate, as in the sentences in (6). Now, when the underlying form is f , the assimilation process does not apply, so that we get:

(20) a. [k^{h}ip ræ^{o}f šət əp] 'Keep Ralph shut up'
b. [t^{h}ɜn ɔf sɛsəmi strit] 'Turn off Sesame Street'

The following alternations appear to be unacceptable for both standard and nonstandard dialect speakers:

(21) a. *[k^{h}ip ræ^o šət əp] 'Keep Ralph shut up'
b. *[t^{h}ɜn ɔ sɛsəmi strit] 'Turn off Sesame Street'

When we look at our speakers who use morpheme-final [f] as a correspondent for standard English [θ], we still find that they undergo the assimilation process that operates only when /θ/ is the underlying form. Since we can construct the sort of environment in which /θ/ undergoes assimilation for practically any word-final instance of underlying /θ/, there is no reason to believe that any rule input should remain partially unspecified in this position. We thus conclude that Fasold's (1967) decision to leave some instances of morpheme-final [f] as the realization of a segment that is not fully specified as θ cannot be justified. The rule must have as its input fully specified /θ/ instead of the partial specification given in Rule (19).

Up until now, we have discussed the incidence of f and θ in morpheme-final position as if the only constraint on the incidence of f is nonlinguistic, i.e. a function of peer contact with blacks. But our investigation of a number of phonological variables has indicated that for practically all instances of f, there is some independent linguistic constraint on variability. One of the very common constraints indicated by previous studies is whether the following morpheme (either within or across external word boundaries) begins with a vowel or a nonvowel, i.e. a consonant or a pause. We may investigate the possible influence of this constraint in the following table:

Table 11. Comparison of f realization for potential θ in vocalic and nonvocalic environments for Puerto Rican and black informants.

	__V				__-V			
	f	%f	θ	%θ	f	%f	θ	%θ
Puerto Rican	14	58.3	10	41.7	50	52.1	46	47.9
Black	16	88.9	2	11.1	20	76.9	6	23.1

Although there is a slight increase of θ for both groups when the following environment is nonvocalic, the variable does not show the clear-cut conditioning on variability that other variables have had on the basis of this distinction: That is, no statistical significance can be demonstrated on the basis of the difference between these environments.

One environment that previous studies have indicated is significant for the variability of f and θ realizations is the distinction between morpheme-medial and morpheme-final positions. Wolfram's study (1969:89) reveals that f is used approximately twice as frequently in morpheme-final position as it is in morpheme-medial position. The following table reveals the difference between f realizations in morpheme-medial and -final positions, again including the black informants for comparison:[13]

Table 12. Comparison of *f* realization for potential *θ* in morpheme-medial and morpheme-final positions for Puerto Rican and black informants.

	Morpheme-Medial	Morpheme-Final
Puerto Rican		
No. of *f*/Total	12/50	64/110
% *f*	24.0	58.2
Black		
No. *f*/Total	3/15	36/44
% *f*	20.0	81.8

The difference between the two environments is quite evident, the morpheme-final position clearly favoring the incidence of *f*.

This sort of obvious constraint on variability can then be incorporated into Rule (19) which we posited earlier for *θ* → *f*. This rule can now be reformalized as:

(22) $\theta \rightarrow (f) \ / \ \_\_\_ A\#$

In this way, we can account for the observed variability that we find in our corpus.

4.2.4 *The incidence of t*. Apart from the incidence of *t* in *with* and *nothing*, which we will consider in more detail below, the occurrence of *t* for potential *θ* in morpheme-medial and -final positions is infrequent. Because of its low frequency, i.e. less than 3 percent when all morpheme-medial and -final occurrences of potential *θ* are considered, we may ask if this is, in fact, a legitimate variant that must be described as an integral part of the dialect. Wolfram's (1969:87) study of the *θ* variable for black speakers in Detroit revealed that *t* tends to be conditioned by its contiguity to a nasal segment, in both morpheme-medial and -final positions. Thus, in words like arithmetic and month, underlying θ can be realized as t.

The actual occurrence of these types of environments is restricted in our spontaneous conversation section of the interview, so that our data from this style are inconclusive. However, in order to compensate for the paucity of examples with potential θ contiguous to a nasal in this style, the items month and arithmetic were given as a part of the word list reading section of the interview. Although this represents a different style, it is instructive to look at the distribution of variants for these two items in the reading lists.

Table 13. Distribution of variants for potential θ contiguous to a nasal for Puerto Rican and black informants.

Variant	Puerto Rican	Black
θ	26	11
f	4	6
t	13	5
∅	1	-

The incident of t as a legitimate variant is clearly indicated in Table 13. For the Puerto Rican group, even in a very formal style, t is realized in over 29 percent of all cases. This observation clearly attests to the validity of a rule that might be represented as:

(23) $\theta \rightarrow (t)\ /[+\mathrm{nas}]\_$[4]

Now, it is important to note here that we are positing a rule that accounts for a relatively infrequent variant when the overall incidence of t is considered. In our discussion of the s variant, which occurred at approximately the same frequency level as t in our overall tabulation, we conclude that it is not an integral part of the dialect we are describing. The difference between the infrequency of s and that of t lies in the fact that the overall infrequency of *t* is simply a function of the failure to isolate environments that would raise its incidence to a level of accountability, i.e. it must be included in our formal description of a native speaker's competence. But in the case of *s*, the delimitation of natural types of environmental differences that might raise its incidence to the level of accountability did not appreciably increase its incidence. Low overall frequency, in itself, is not a valid reason for dismissing certain types of potential variants that may have to be described as an integral part of a given dialect.

While we have seen that the delimitation of a contiguous nasal may effect a rule such as $\theta \to t$, we still have not accounted for several examples of *t* for potential *θ*. Do we need to extend our rule to account for two examples of *teeth* and *mouth* as [t^{h}it] and [ma^{o}t] respectively? A close look at the natural types of environments that might account for this realization does not show an appreciable increase in its incidence: It is still realized in less than 5 percent of all potential occurrences.[15] It is, therefore, our cautious conclusion that the *t* variant for these items is not an integral part of the dialect, i.e. it might be a performance error of some type or vestigial interference since Spanish speakers may also use *t* for *θ*. Based on this conclusion, it need not be accounted for by the rules of the dialect, although there is a clear-cut need for the $\theta \to t$ rule contiguous to nasals. This may appear to be an arbitrary statistical decision, but we must mention that the distinction between competence and performance can only be determined statistically in some cases in which the actual speech of a spontaneous conversation provides our primary data.

Having established the effect of nasals on *t* realization on the basis of our previous discussion, we can now turn to the incidence of *t* in the item *nothing*. Of the variants that have been observed for this item (*t*, *Ø*, *θ*, and *f*), *t* is the most frequent, occurring in 47 percent of all cases (40 of 85) for the Puerto Rican informants and in 64 percent of all cases (29 of 45) for the black informants. Although *nothing* does not have an immediately contiguous nasal in the underlying representation that will need to be posited, i.e. //nəθIŋ//, it is observed that there is a noncontiguous nasal in the following syllable. And when we look at the phonetic realization of this item, we observe that the actual phonetic environment is a contiguous syllabic nasal. Thus, the most frequent phonetic form for *t* (or the phonetic alternate [ʔ] or [t˺]) is:

(24) a. [nət˺n̩]

b. [nəʔn̩]

We do not get:

c. *[nətən]

d. *[nəʔən]

The fact that (24a) and (24b) are, for the clear majority of informants, the only types of the form that occur makes it reasonable to suggest that for most speakers, Rule (23), which changes *θ* → *t*, actually operates after the nasal has been placed immediately contiguous to underlying //θ//. This means that the vowel centralization rule (Rule 25), which changes *I* → *ə*, and the subsequent rule for schwa deletion (Rule 26) in this sort of environment must precede Rule (23): That is, *I* → *ə* and *ə* → *Ø* must come before *θ* → *t*. Eliminating details irrelevant for our discussion here, the rules for vowel centralization and schwa deletion might be approximated as:

(25) $$\begin{bmatrix}\text{-stress}\\ \text{-tense}\\ \text{V}\end{bmatrix} \rightarrow \text{ə}$$

(26) $$\text{ə} \rightarrow (\emptyset) \; / \; \begin{bmatrix}\text{+cons}\\ \text{-nas}\end{bmatrix} \; \begin{bmatrix}\underline{\hspace{3em}}\\ \text{-stress}\end{bmatrix} \; [\text{+nas}]$$ [16]

For some reference to the sorts of environmental constraints that will have to be built into a more accurate statement of this rule, see Bailey (1969a).[17] I have here simply followed William K. Riley's observation (personal communication) that syllabication for nasals can occur following practically all consonants in casual style, although there is considerable variability in the syllabication depending on the type of consonant.

4.2.5 *The case of with*. Finally, we must discuss the incidence of variants for the item *with*, since the realization of some of the variants in this item appears to operate differently from those in our previous account. The following table compares the incidence of variants for *with* for the Puerto Rican and the black groups of informants:

Table 14. Distribution of variants for potential *θ* in *with* for Puerto Rican and black informants.

Variant	Puerto Rican		Black	
	No.	% of Total	No.	% of Total
t	150	59.5	62	63.9
Ø	64	25.4	17	17.5
θ[18]	24	9.5	6	6.2
f	14	5.6	12	12.4
Total	252		97	

The above table indicates that all the main variants that we delimited at the beginning of our discussion for medial and final potential *θ* are realized by both groups. The general incidence, furthermore, indicates that *t* and *Ø* are the most frequently occurring variants.

Before discussing the conditions for the incidence of *t* and *Ø* in this item, it should be noted that there is an additional subvariant of t which we have not discussed previously, namely, [č]. This is observed in contexts such as:

(27) a. [wIč yə] 'with you' (9:8)
b. [wIč yə] 'with you' (10:10)

The realization [č] can be accounted for by a palatalization rule when t occurs preceding a word (generally unstressed) beginning with y, and is not necessarily restricted to the item with. We thus get:

(28) a. [bɔč yɝ šuz] 'bought your shoes'
b. [bIč yɝ hænd] 'bit your hand'

The palatalization rule, which operates for both voiced alveolar stops, e.g. [dIǰ yə] 'did you', and voiceless alveolar stops, e.g. (28), may be given as:

(29) $$\begin{bmatrix}\text{-voc}\\ \text{-cont}\\ \text{-nas}\\ \text{+cor}\end{bmatrix} \rightarrow ([\text{-ant}]) \;/\; \underline{\quad}\ \#\# \begin{bmatrix}\text{-voc}\\ \text{-cons}\\ \text{-back}\end{bmatrix}$$

This rule, which also applies to standard English, accounts for the examples of the subvariant [č]. The affricate [č] is rightly considered as a subvariant of t because the input of the palatalization rule is necessarily an alveolar stop and not a fricative, i.e. *[ma^{o}č yə] 'mouth you'.

4.2.5.1 Accounting for the incidence of t. In our previous discussions of t for potential θ in morpheme-medial and -final positions, we have seen that the incidence of t is mainly conditioned by its contiguity to a nasal. But for with, no such environmental statement can be made. It occurs preceding a vowel or any of the nonnasal consonants, in addition to its occurrence when the following word begins with a nasal. How, then, do we account for the incidence of t in with? Several alternatives can be considered here. As a first alternative, we may look for some sort of phonological conditioning for the occurrence of t. Wolfram (1969:87) has suggested that one possible phonological explanation for the occurrence of *t* in *with* may be the fact that, as a preposition, it tends to occur in unstressed types of environments. For example, it is generally *not* assigned either 1 or 2 stress in the application of stress ranking, as in:

(30) a. $\overset{3}{\text{with}}\ \overset{4}{\text{my}}\ \overset{2}{\text{new}}\ \overset{1}{\text{bike}}$

b. $\overset{3}{\text{with}}\ \overset{4}{\text{a}}\ \overset{2}{\text{red}}\ \overset{1}{\text{cross}}$

However, the majority of examples of potential *θ* that have been discussed previously would have to be assigned a stress ranking of 1 or 2, as in:

(31) a. $\overset{4}{\text{a}}\ \overset{2}{\text{nice}}\ \overset{1}{\text{too}\underline{\text{th}}}\ \overset{3}{\text{brush}}$

b. $\overset{3}{\text{in}}\ \overset{4}{\text{a}}\ \overset{1}{\text{phone}}\ \overset{2}{\text{boo}\underline{\text{th}}}$

At first glance, then, it would appear that stress might be the relevant conditioning environment for the *t* realization, and that the rule might be written as:

(32) $\theta \rightarrow (t) / \begin{bmatrix} -\text{stress} \\ \text{V} \end{bmatrix}\ \underline{\quad\quad}\ \#\#$

But before we conclude that this is the clear-cut solution in accounting for *t* with *with*, we must see if there are any contexts in which *with* might be assigned a surface stress ranking of 1 or 2. We notice that in several contexts, *with* can occur with a stress ranking of at least 2 and possibly 1. Generally, these contexts are due to the emphasis on *with* or to the occurrence of *with* in clause-final position by ellipsis or rearrangement of syntactical units. Thus, we can get:

(33) $\overset{2}{\text{You}}\ \overset{3}{\text{coming}}\ \overset{1}{\text{with}}\ \overset{4}{\text{us?}}$

This distribution for our informants is given in Table 15.

Even with the limited number of examples in Table 15, we can see that the data do not confirm the observational adequacy of Rule (32): *t* still occurs in approximately one-third of the cases. On the other hand, however, when we compare Table 15

Table 15. Distribution of variants for potential *θ* when *with* is stressed for Puerto Rican and black informants.

Variant	Puerto Rican	Black
t	4	3
f	6	3
θ	2	2

with Table 16 below, we do see what appears to be a constraint on the variability of *t*, the change from *θ* to *t* operating more frequently when *with* is unstressed than when it is stressed. But a careful examination of the phonological conditioning environments does not turn up an exclusive environment for the operation of *θ* → *t* for *with*.

If our failure to discover a consistent phonological environment for the realization of *t* in *with* is an accurate assessment of the data, what are our alternate solutions? On the one hand, we might suggest that it is necessary to posit two underlying lexical representations for the item *with*: one that would be given with underlying //t// and one with underlying //θ//. Although we would need a rule such as *θ* → *t* as a part of the dialect we are describing, it would be necessary to specify the two underlying representations for *with* because we cannot discover any consistent phonological environment in which this rule can apply to a single underlying representation of this item. Presumably, this is the type of solution one might suggest for speakers who variably realize an item such as *either* as [a^{e}ðɚ] and [iðɚ]. We might have to postulate a rule that changes a high front vowel into a diphthong or vice versa, i.e. *i* → *a^e* or *a^e* → *i*, to handle other phonological processes; however, we probably would not be able to isolate an exclusive phonological environment for this change that would allow us to incorporate it into a previously established phonological rule. Thus, we might conclude that we must posit dual underlying representations to account adequately for the speaker's competence in his use of the alternate forms. Admittedly, however, such a conclusion is not intuitively satisfactory and might be adopted only as a last resort. Perhaps a more important reason for viewing this solution skeptically is the variability of *t* and *f* or *θ*, depending on the stress assignment on *with*. We would not generally expect phonological conditioning of this type on the variability of items that are, in essence, entered in the lexicon as different units. The choice of lexical items would be expected to vary much more according to extra-linguistic factors, such as participants, style, setting, etc. For example, [iđ] might be expected more frequently in informal styles and [a^{e}đ] more frequently in formal styles, but we would not expect their alternation to vary according to phonological environment if they were authentic lexical differences.

The alternate solution to dual lexical representations is to represent *with* with a single underlying representation, which would presumably be /wIθ/, and then allow the application of the *θ* → *t* rule to be item-specific with respect to *with*. In other words, one environment for the application of *θ* → *t* is the lexical item *with*. In this way we can still build in the constraint on variability depending on stress so that the change of *θ* → *t* for this item can be represented as:

$$(34)\quad \theta \rightarrow (t)\ /\ \#\# \begin{bmatrix} \text{wI}\ \underline{\quad\quad} \\ \text{A -stress} \end{bmatrix} \#\#$$

This rule, then, can be coalesced with Rule (23) by describing the environmental sets disjunctively, so that we now have the following for Rule (23):

$$(35)\quad \theta \rightarrow (t)\ /\ \left\{ \begin{matrix} [\text{+nas}] \\ \#\# \begin{bmatrix} \text{wI}\ \underline{\quad\quad} \\ \text{A -stress} \end{bmatrix} \#\# \end{matrix} \right\}^{12}$$

Admittedly, the conclusion that θ → t can be conditioned lexically is not a completely satisfying solution. But until we have further phonological data that might lend consistency to a statement dependent exclusively on phonological environment, we must settle for a less intuitively satisfying solution to account for the descriptive facts.

4.2.5.2 Accounting for the incidence of Ø. In order to consider the distribution of the Ø variant for with, it is first necessary to observe the distribution of all variants according to whether the following environment is consonantal or nonconsonantal. The distribution of variants for the Puerto Rican and black informants is illustrated in the following figure and table:

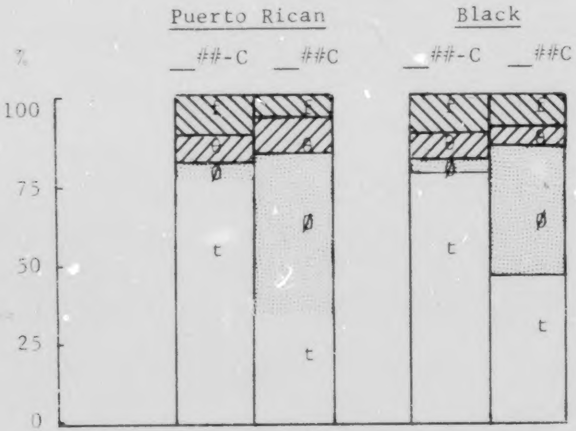


Figure 4. Distribution of variants for potential θ in with in nonconsonantal and consonantal environments for Puerto Rican and black informants.

Table 16. Distribution of variants for potential *θ* in *with* in nonconsonantal and consonantal environments for Puerto Rican and black informants.

Variant	Puerto Rican				Black			
	__##-C		__##C		__##-C		__##C	
	No.	%	No.	%	No.	%	No.	%
t	114	78.1	36	34.0	43	76.8	19	46.3
Ø	3	2.1	61	57.5	1	1.8	16	39.0
θ	18	12.3	6	5.7	4	7.1	2	4.9
f	11	7.5	3	2.8	8	14.3	4	9.8
Total	146		106		56		41	

Several observations can be made on the basis of the above data. To begin with, we observe that the following consonantal environment is almost exclusively responsible for the incidence of *Ø*. When followed by a vowel or a pause, some segment is generally present. It is also important to note that the main difference is found in the incidence of *t*; *t* is the variant that is reduced in an inverse proportion to the greater frequency of *Ø* before consonants: that is, the sum of *t* and *Ø* is approximately the same for the two environments.

If the incidence of *Ø* in *with* is compared with the incidence of *Ø* for other types of morpheme-final potential *θ* for other types of morpheme-final potential *θ*, we find that its frequency with *with* is much greater: 57.5 percent for *with* followed by a consonant; 15.3 percent for other morpheme-final items followed by a consonant. To understand the significance of this difference, it is necessary to recall that *Ø* realization for items other than *with* is largely due to the assimilation process described in Rule (18). This assimilation process, it was noted, is largely restricted to certain types of fricatives. But when we look at the incidence of *Ø* for *with*, we note that it does not show these same types of restrictions. It is observed before practically any consonant, as attested to in the following examples:

(36)	a.	[wI ma^{e}]	'with my'	(14:5)
	b.	[wI k^{h}ɛlɪ]	'with Kelly'	(11:5)
	c.	[wI hIm]	'with him'	(14:6)
	d.	[wI stIkbɔl]	'with stickball'	(5:2)
	e.	[wI gɝlz]	'with girls'	(44:6)
	f.	[wI be^{I}sbɔl]	'with baseball'	(44:1)

It is obvious, then, that *0* realization for *with* cannot be accounted for simply by the application of our assimilation rule. Rather, it appears to be a deletion of *t* after it has been derived from underlying θ.[20] We will see in Chapter 5 that the deletion of final *t* and *d* is a rule that will be needed anyhow, so we can simply apply the rule now to account for *0* in *with* as well as in other items. Obviously, this alveolar stop deletion rule must be ordered after Rule (35), which changes *θ* to *t* in *with*. It also appears that this deletion rule should be ordered after the palatalization rule (Rule (29)), so that it cannot operate on items that will end in [č]. If we allow the palatalization rule to be ordered before this deletion rule, we can account for the fact that *y* is the only nonvocalic segment before which we have no examples of deletion: out of 11 potential examples before *y*, none shows *0* realization. We see that the change from *t* to *č* before *y* makes certain examples of *with* ineligible for the *t* deletion rule.

A final point that can be made concerning *0* realization relates to the comparison of *0* for the Puerto Rican and the black informants. The Puerto Rican informants, as a group, tend to show more *0* realization than do the black informants. Anticipating our discussion of final *t* and *d* deletion in the following chapter, we may note that this fits the general pattern for final *t* deletion, which is considerably more frequent in Puerto Rican English than it is in Black English.

4.3 *Summary of rules*. Following is a list of the rules that we have formulated as necessary in order to account for the various realizations of underlying /θ/, renumbered as (37) and placed in the proper order insofar as is known. (Each rules original numbering is indicated in parentheses after its title.) Some of the rules do not relate directly to the derivations from underlying /θ/, but they are included here because they account for certain processes necessary to understand the rules pertaining directly to θ. In most cases the reasons for particular orderings have been discussed in the preceding sections; in a few cases, however, there are no formal motivations for selecting the ordering of the rules that have emerged on the basis of our discussion, so that the order may be arbitrary.

(37) a. Voiceless assimilation (10)

$$\begin{bmatrix} -\text{voc} \\ +\text{cont} \\ \alpha\text{ant} \\ \beta\text{cor} \\ \gamma\text{strid} \end{bmatrix} \rightarrow ([-\text{voice}]) / \begin{bmatrix} -\text{voc} \\ +\text{cont} \\ -\text{vd} \\ \alpha\text{ant} \\ \beta\text{cor} \\ \gamma\text{strid} \end{bmatrix} \#\#\_\_$$

b. Regressive fricative assimilation (18)

$$\theta \rightarrow \left(\begin{bmatrix} \alpha\text{ant} \\ \beta\text{cor} \\ \gamma\text{strid} \end{bmatrix} \right) / \_\_\_\#\# \begin{bmatrix} -\text{voc} \\ +\text{cont} \\ -\text{vd} \\ \left\{ \begin{matrix} A \begin{bmatrix} \alpha\text{ant} \\ +\text{cor} \\ +\text{strid} \end{bmatrix} \\ \begin{bmatrix} +\text{ant} \\ -\text{cor} \\ -\text{strid} \end{bmatrix} \end{matrix} \right\} \end{bmatrix}$$

c. Progressive sibilant assimilation (13)

$$\theta \rightarrow ([+\text{strid}]) / \begin{bmatrix} -\text{voc} \\ +\text{strid} \\ +\text{cor} \end{bmatrix} \# \_\_\_$$

d. Vowel reduction (25)

$$\begin{bmatrix} -\text{stress} \\ -\text{tense} \\ \text{V} \end{bmatrix} \rightarrow \text{ə}$$

e. Schwa deletion (26)

$$\text{ə} \rightarrow (\emptyset) / \begin{bmatrix} +\text{cons} \\ -\text{nas} \end{bmatrix} \begin{bmatrix} \overline{} \\ -\text{stress} \end{bmatrix} [+\text{nas}]$$

f. Morpheme-final stop (35)

$$\theta \rightarrow (\text{t}) \; / \left\{ \begin{matrix} [+\text{nas}] \\ \#\# \begin{bmatrix} \text{wI}\_\_ \\ \text{A -stress} \end{bmatrix} \#\# \end{matrix} \right\}$$

g. Morpheme-initial stop (2)

$$\begin{bmatrix} +\text{cons} \\ -\text{voc} \\ +\text{cor} \\ +\text{ant} \\ -\text{strid} \end{bmatrix} \rightarrow ([-\text{cont}] \; ([+\text{sim rel}]))/ \; \#\#[\text{A } \overline{\text{vd}}] \; [\text{B cons}]$$

h. Palatalization (29)

$$\begin{bmatrix} -\text{voc} \\ -\text{cont} \\ -\text{nas} \\ +\text{cor} \end{bmatrix} \rightarrow ([-\text{ant}])/ \; \_\_ \; \#\# \begin{bmatrix} -\text{voc} \\ -\text{cons} \\ -\text{back} \end{bmatrix}$$

i. Alveolar stop deletion*

$$\begin{bmatrix} -\text{voc} \\ -\text{cont} \\ -\text{nas} \\ +\text{cor} \\ +\text{ant} \end{bmatrix} \rightarrow (\emptyset) \; / \; \_\_ \; \#\#$$

j. Labio-dental fricative (22)

$$\theta \rightarrow (\text{f}) \; / \; \_\_\text{A}\#$$

k. Geminate consonant reduction (14)

$$\text{C} \rightarrow \emptyset \; / \; \_\_ \text{ an identical C}$$

* In this summary, (i) is simply an approximation of Rule (39), which will be discussed in detail in Chapter 5.

Now, it is noted that some of the rules in the above set are common to both standard English and various nonstandard dialects, while others are peculiar to nonstandard dialects such as PRE. For example, the assimilation rules (a, b, and c) are common to nonstandard and standard dialects of English, but the stop realizations and labio-dental fricative realizations for underlying θ (f, g, and j) are unique to certain nonstandard varieties. In this sense, this variable seems to be quite like other nonstandard variables that show both shared and unique aspects when compared with standard English.

It should further be noted that some independent linguistic constraints on variability have been incorporated for rules re[illegible]ing directly to the derivation of phonetic realizations from underlying //θ//. Although we have isolated some constraints that are to be incorporated in an adequate descriptive account, it should be observed that this variable does not reveal an extensive ordering of constraints. In fact, only one variable rule shows as many as two hierarchical orders. This cannot be attributed to our lack of detail in searching for valid linguistic constraints; rather, it appears to be an indication that there is a limited amount of hierarchical ordering in the constraints on variability. Unlike other variables that may reveal a fairly extensive natural hierarchy of constraints, e.g. final consonant clusters, this variable shows only a limited hierarchy.

NOTES

1. There is some question as to the feature of t that is actually stigmatized. According to Bailey (personal communication), it is the place, not the manner of articulation, that is the stigmatized aspect. Thus, according to Bailey, a gingival stop would be stigmatized, but a dental stop would not be.

2. Labov et al. (1968) have built the feature of voicing into this rule as a variable constraint that raises the relative frequency of rule application. But they do not state whether this variable constraint is to be applied if only the first part of the rule (in actuality, the first of two rules) is chosen. According to the empirical data presented by the authors, however, it is clear that this constraint can only operate when both options of the rule have been chosen. They observe:

   > ...we find that Negro speakers use a great many affricates for (th), (th-2), but that the prevailing form for (dh) is the stop, (dh-3). (Labov et al. 1968:96)

Without explicitly establishing the convention that a variable constraint can apply only to the last option in a coalesced rule output involving two or more optional outputs, an adequate account of variability can be achieved only by keeping the rules separate.

3. Labov et al. (1968) do not say where or how the nondistinctive features have been previously introduced. Generally, they have been placed in very low-level phonological rules, but Stanley (1967:394) has suggested that there is good reason to include these nondistinctive predictions in the morpheme structure sequence rules.

4. See Wheeler (1971) for some of the theoretical shortcomings of this convention.

5. This convention change was suggested by William K. Riley in personal communication.

6. When we say that s falls into the range of "chance occurrence", we are referring to a statistical rather than a structural fact. Performance errors may occur randomly in terms of their frequency, but they are structured in terms of the types of "slips" that may occur.

7. The transcriptions here and elsewhere are meant to be only broadly phonetic. Finer phonetic detail is not typically included.

8. In actuality, the same type of assimilation operates for the voiced counterpart of θ in casual speech, so that we have sentences like:

[yu bri zɛst fɝ la^{e}f]	'You breathe zest for life'
[yu bri vɛri hɛvəli]	'You breathe very heavily'
[šiz ə smu žaža gəbor ta^{e}p]	'She's a smooth Zsa Zsa Gabor type'

These appear to be quite acceptable in an allegro style of standard English. This means that the rule would specify those features common to đ and θ.

9. Apparently there are some standard English speakers for whom the appropriate assimilation here is [fIf]. For these speakers, the progressive assimilation rule is stated more generally.

10. It is interesting to note that for (16b) there is a vocalic

shift that is conditioned on the basis of the existence of a voiceless segment following the n in ninth. When there is a voiceless consonant forming a cluster with n, there is a centralizing tendency in the vowel nucleus, but when there is no voiceless consonant, it does not centralize. Thus, we get:

[nə^{e}n stɔri]	'ninth story'
but [na^{ɛ}n stɔriz]	'nine stories'

This phenomenon indicates that the assimilation and deletion rules must follow the rule for centralization.

11. Although the convention we are suggesting here is initiated in order to incorporate a variable constraint, the same convention might allow certain types of rule collapsing presently prohibited in a more traditional interpretation of generative phonology, i.e. a theory that does not formally admit the incorporation of variable constraints.

12. This feature specification assumes that both [θ] and [f] are [-strid], but this is a matter that is still not resolved. Chomsky and Halle (1968:177) consider [f] to be [+strid], but their description of stridency, i.e. "a rougher surface, a faster rate of flow, and an angle of incidence closer to ninety degrees will all contribute to greater stridency", seems to unite rather than distinguish [θ] and [f]. At any rate, this is not crucial to our discussion, since we could simply state the rule as:

$$\begin{bmatrix} -\text{voc} \\ +\text{cont} \\ +\text{ant} \\ -\text{vd} \end{bmatrix} \rightarrow \left(\begin{bmatrix} -\text{cor} \\ +\text{strid} \end{bmatrix} \right) \ / \ \underline{\quad}\#\#$$

if we decide that [f] is [+strid]. Wheeler (1971:100) has recently suggested that the feature [strident] can be dispensed with altogether, its functions having been taken over by [distributed] and [delayed release].

13. Bailey (personal communication) notes that the incidence of f for θ is actually related to syllabication rather than to morpheme position. For example, he notes that ether could have f but ethereal could not. If this is true, and it appears to be a reasonable hypothesis, then the designations morpheme-medial and -final are approximative of a more strictly phonologically conditioned phenomenon.

14. Following the suggestion made by Bach (1966), the absence

of the ___ to indicate placement in terms of environment is an abbreviation for an "either after or before" relationship. Thus, /[+nasal] is an abbreviation for:

$$\left\{\begin{array}{ll}[+\text{nasal}]\ \_\_\_ & \\ & \_\_\_\ [+\text{nasal}]\end{array}\right\}$$

If a rule changing a preceding nasal segment to a nasal vowel has taken place, i.e. V[+nasal] → Ṽ, the frequency of rule application is greatly reduced. For an elaboration of nasal consonant deletion in English, see Bailey (1973a). It is doubtful if Bailey's interpretation would allow for a surface nasal consonant to ever occur in *month*, but my data would indicate that it can. Bailey also suggests that the *t* in *nothing* may be interpreted as a generalization of a rule that changes underlying voiced fricatives to stops before syllabic nasals, e.g. *seven* and *eleven*.

15. Some instances of *t* may be due to the type of vestigial interference that we suggested to account for the occasional occurrence of *s*, since *t* may also be an interference variant for morpheme-final *θ* among Spanish speakers learning English.

16. The application of the rule is, of course, more general, extending to at least *r* and *l* in addition to the nasals. Within the feature specifications for English set up by Chomsky and Halle (1968:176-77), it would appear that the inclusion of *r* and *l* in this type of rule would have to be handled by setting up the environments disjunctively. But if one introduced the feature [syllabic], which Bailey and Milner (Chomsky and Halle 1968:354) see as a necessary feature specification, the rule could be stated in a much more general fashion. For example, assuming that *l*, *r*, and the nasals have been given the feature [+syllabic] under special circumstances such as those we are talking about here, the rule might be stated more generally as:

$$\text{ə} \rightarrow (\theta)\ /\ \begin{bmatrix}+\text{cons}\\ -\text{syll}\end{bmatrix} \begin{bmatrix}\_\_\_\_\\ -\text{stress}\end{bmatrix}\ [+\text{syll}]$$

This sort of evidence appears to be strong support for the introduction of the feature [+syllabic].

17. Bailey's (1969a) interpretation is that syllabic nasals are permitted only after homorganic syllable-final obstruents.

18. We must note, of course, that in some varieties, we get [wIð] instead of [wIθ]. In terms of the variants, this

would simply be included as the standard variant *θ*. To account for this variant, the input for the rule changes would have to be generalized to include //đ// and //θ//. We will only deal with //θ//, with the understanding that for some varieties, the rule will have to be altered slightly, e.g. *d* for //đ//.

19. Technically speaking, Rule (35) should not include *with* since this exception is to be noted in the lexicon: that is, the lexical entry for *with* will simply specify that Rule (35) applies to it in the appropriate environment.

20. The assimilation rule may, of course, still operate on instances of *with* in which *θ* is not changed to *t*. If the assimilation rule is ordered before *θ* → *t*, then it will account for instances of *∅* before fricatives, the *t* deletion rule accounting for other examples of *∅*. If, on the other hand, *θ* → *t* is ordered before assimilation, the assimilation process operates only on those instances of underlying //θ// that have not undergone the *θ* → *t* change. The former order is chosen here, although our data furnish no overwhelming argument for doing so.

5 SYLLABLE-FINAL ALVEOLAR STOPS

The *th* variable discussed in the preceding chapter is one of the most socially diagnostic variables operating in American society. In initial position, it is part of a variable that apparently cuts across all regional and ethnic varieties of English in its social significance. In some positions, we see that the interference variant from Spanish-influenced English and the English variant of the surrounding black community are in competition: Black English calls for [f] (varying with the standard English variant [θ]) and Spanish-influenced English calls for [s]. It is obvious that the Black English realization is favored for all speakers, even those with restricted black contacts. Those with more direct black contacts, of course, are influenced to a significantly greater extent than are those with restricted contacts.

Now, we turn our attention to a variable, namely, syllable-final *d* and *t*, that operates in a somewhat different way. In syllable-final position, when preceded by a vowel or constricted *r*, underlying //d// or //t// may be realized in PRE in several different forms. For underlying //d//, *t* and *Ø* are the main non-*d* realizations; for //t//, *Ø* is the main non-*t* realization. Previous studies of social dialects have indicated that this variable is not restricted to our population; rather, it has broader significance than the group we are studying here. It has been noted in studies of Spanish-influenced English and Black English.

One of the characteristic features of Puerto Rican Spanish is the deletion of d in syllable-final position. Thus, in words like verdad 'truth' and ciudad 'city', the final d may be deleted, giving [bɛřdá] and [siuđá] respectively. Because of this phonological pattern in Puerto Rican Spanish, this process might be predictable in Spanish-influenced English for this community. Ma and Herasimchuk (1968) have tabulated this variable in the speech of a Puerto Rican community in Jersey City and have found that d and t deletion is characteristic to some extent. Their brief discussion cannot, however, be compared with our analysis here for several reasons. In the first place, they do not make any environmental distinctions in tabulating variability. As will be seen, an accurate assessment of variability for this feature is dependent on the distinction of several different environments. Their failure to distinguish environments such as the effect of a following consonant or vowel allows them to come to the conclusion that "PRE speakers most usually give some phonetic marker for final /t/ or /d/" (Ma and Herasimchuk 1968:740). We will see that this statement does not necessarily hold when various environmental constraints are examined.

Ma and Herasimchuk have also combined variants of these variables in such a way that it is impossible to get a valid picture of how the various phonetic realizations operate with respect to underlying /t/ or /d/. For example, they consider the glottal stop [ʔ] as a variant for either t or d, but do not separate the two potential underlying sources from each other. This procedure can be quite misleading, since in the case of underlying /t/, glottal stop may be a standard variant, while in the case of underlying /d/, it is quite clearly a nonstandard variant. To consider glottals derived from either /t/ or /d/ as one variant does not allow for an accurate social differentiation. Glottal realizations may operate quite differently for these two underlying sources.

Furthermore, one may question the perceptual reliability of their categories of variants. They have set up three variants for *t* and *d*: (1) [t] or unreleased [t˺]; (2) glottal stop [ʔ]; (3) no phonetic realization at all. Previous studies have established that we can expect reliability in perceiving impressionistically the differences among *t*, *d*, and *Ø*, but the perception of the difference between glottal stop and unreleased [t˺] cannot be expected to show such a high degree of reliability. To separate glottal stop and unreleased [t˺] into two different variants would appear to reduce the reliability of perception considerably.

Labov et al. (1968), Wolfram (1969), and Fasold (1972) have all looked at the phonological processes that operate on *d* deletion in Black English. Labov et al. (1968) have considered postvocalic *d* and *t* deletion to be a part of the same rule that deletes *d* and *t* following consonants. No detailed frequency study, however, is made of the deletion of postvocalic *d*. Wolfram (1969) has restricted his study to cases of postvocalic *d* that do not have any grammatical function, e.g. *bad* but not *showed*. His analysis has isolated several types of constraints on the variability of *d*, including following vowel or nonvowel and stress. Fasold (1972) deals exclusively with *d* as a grammatical marker and finds that some of the same general constraints isolated by Wolfram for nongrammatical *d* are operating on *d* when it is a grammatical marker. The various constraints isolated by Wolfram and Fasold will be examined in some detail later, and the rules needed to handle these variable constraints will be discussed in that context.

5.1 *The variants*. As suggested above, we can identify three relevant variants for underlying /d/ and two for underlying t . The variants for *d* and the various submembers of those variants are given below:

Variant	Phonetic Realization	Examples	
d	[d][1] [d̆]	[hU:d]	'hood'
		[hU:d̆ ɔn]	'hood on'
t	[t˺] [ʔ] [ʔt˺]	[hU:t˺] ~ [hU:ʔ] ~ [hU:ʔt˺]	'hood'
∅		[hU: bæk]	'hood back'

This differentiation of variants essentially follows that of Wolfram (1969:95).

It should be noted that the tabulation of *d* includes both *d* that is a morphophonemic representation of the grammatical suffix -*ed*, i.e. following vowels as in *prayed*, and *d* that is part of the stem of a word. The grammatical function of *d* includes its usage as a past tense marker, e.g. *He cried for a long time*; as a derived adjective, e.g. *He's a colored kid*; and as a participle, e.g. *He was tried for murder*.

The variants for *t* are as follows:

Variant	Phonetic Realization	Examples	
t	[t] [t˺] [ʔ]	[hæt˺] ~ [hæʔ]	'hat'
∅	∅: lengthened following consonant	[hæ]	'hat'

Unlike *d*, *t* can only be used as part of a word stem following a vowel; for *t* there is no underlying analogue to the grammatical function of postvocalic *d*.

The tabulations of *d* and *t* were made for each informant by counting the first 20 potential occurrences of inflectional *d* followed by a nonvowel and the first 15 followed by a vowel. The same procedure was carried out for the noninflectional function of *d* and *t*. In addition to the variants for *d* identified above, we also have an occasional instance of [đ] for *d* intervocalically. This phonetic realization is obviously a matter of Puerto Rican Spanish influence because of the fricativization of voiced stops postvocalically in Spanish. This phonetic realization is not indicated here in any of our tabulations of d for two reasons. First, initial tabulation indicates that its incidence is so low that it clearly fits into the category of vestigial interference as we have defined the concept previously. Furthermore, there is considerable difficulty in consistently perceiving the difference between lenis [d̥] and fricativized [đ] when transcribing from a tape recorder, thus prohibiting a reliable tabulation of [đ].

5.2 The incidence of ∅ for underlying //d//. Previous studies of the ∅ realization for d indicate that there are several different types of environments that may affect the realization of ∅. Some of these are general types of environments that have been seen to affect variability for a number of features; others appear to be more specific in their application.

One of the most commonly noted influences on variability is the presence or absence of a vowel following a segment. Studies of variability in Black English by Wolfram (1969) and Fasold (1972) have revealed that this is one of the major constraints on d deletion. Both have indicated that a vocalic environment inhibits the incidence of ∅. In Table 17, we present the figures for d deletion based on whether the following segment is vocalic or nonvocalic. The nonvocalic environment includes both a following consonant of some type and a pause. For the sake of this table, we will combine the d and t variants for d under the category of presence, so that we only have a binary classification into presence and absence. Figures are given for the 29 Puerto Rican informants, based on the extracted examples we described above.

Table 17. Frequency of Ø realization for potential d in vocalic and nonvocalic environments for Puerto Rican informants.

	____## V	____## -V
No. del./Total	70/340	427/737
% del.	20.6	57.9

The difference between Ø realizations for the two environments is quite clear-cut: a following nonvowel favors the operation of d deletion. This constraint is the same as that identified by both Wolfram (1969:99) and Fasold (1972:41) for the deletion of d in Black English.

Another factor that previous studies have shown to affect the variability is stress. The general principle that has been observed is that occurrence in an unstressed syllable favors the deletion of segments, whereas occurrence in a stressed syllable inhibits deletion. This has been observed for a number of different variables and has specifically been described for d deletion by both Wolfram (1969) and Fasold (1972). The relative frequency of d deletion in stressed and unstressed syllables can be observed in Table 18. Since we have already noted the importance of a following vocalic or nonvocalic environment, it is appropriate to consider the effect of stress in terms of these environments. There are two main types of environments that we have classified as unstressed in our tabulations: (1) d that occurs in an unstressed syllable of a polysyllabic word, such as treated, stupid, or record; (2) that occurs in an unstressed modal. The latter is illustrated in sentences such as I don't think he should gó and John would gó if he weren't so tired. Stressed environment refers to any instance of potential d that occurs in a stressed syllable of a word such as betrayed, head, or showed.

Table 18. Effect of stress on the frequency of Ø realization for potential d for Puerto Rican informants.

	___##V		___##-V	
	Stressed	Unstressed	Stressed	Unstressed
No. del./Total	54/293	16/47	245/481	182/256
% del.	18.4	34.0	50.9	71.1

Two observations can be made on the basis of Table 18. First, as we might expect, we observe that stress does affect the deletion of d, the occurrence of d in an unstressed syllable favoring deletion more than its occurrence in a stressed syllable. But it is also noted that stress does not have the same effect on variability that a following vowel or nonvowel may have. When the crucial cross-products, i.e. ___##V, Unstressed and ___##-V, Stressed, are compared, it is apparent that the following vowel or nonvowel is the first order constraint and stress or nonstress the second order.

Up to this point, we have not separated those instances of d that are inflectional from those that are inherent parts of the lexical item. Previous tabulations of phonological variability have shown that the grammatical function of a segment tends to inhibit deletion (see, for example, the discussion of Labov et al. (1968) or Wolfram (1969) concerning bimorphemic and monomorphemic consonant clusters) when compared with the same segment occurring as an inherent part of the word. Ma and Herasimchuk (1968) mention this difference but do not carry out any tabulations on the effect of grammatical versus nongrammatical functions of d.

In Table 19, the deletion of grammatical d versus nongrammatical d is tabulated. Since we have already established the effects of a following vowel/nonvowel and a stressed/unstressed syllable on the deletion of d, we will consider grammatical/nongrammatical functions of d in terms of these previously distinguished environments. Only those cases of grammatical d following a vowel or r are considered. This means that all morphophonemic realizations of the -ed suffix as -Id (phonetically [Id], [ɛd], or [ɨd]) following an alveolar stop are not included. Furthermore, instances in which -ɨd forms have been assimilated to a d or a t that is part of the stem (as in stard for started) will be considered later in our discussion.

Table 19. Effect of grammatical marking on the frequency of ∅ realization for potential d for Puerto Rican informants.

	____##V				____##-V			
	Stressed		Unstressed		Stressed		Unstressed	
	Gram.	Nongram.	Gram.	Nongram.	Gram.	Nongram.	Gram.	Nongram.
No. del./Total	6/35	48/258	5/19	11/28	14/34	231/347	40/54	142/202
% del.	17.1	18.6	26.3	39.3	41.2	66.6	74.1	70.3

Table 19 indicates that variability is affected on the basis of whether or not d is a grammatical marker. But it does not appear that this is a major constraint. In fact, the comparison of the cross-products indicates that it is a third order constraint, being ordered after the effect of the following vowel and stress. In only one case is there a slight discrepancy in cross-products (____##-V, Unstressed, Grammatical Marker and ____##-V, Unstressed, Nongrammatical Marker); we will have more to say about the possible reason for this slight discrepancy below.

One final constraint on d deletion, namely, the differentiation of grammatical d on the basis of its various functions, can be examined here. Fasold (1972) suggests that the nonpast functions of d (derived adjective or past participle) tend to favor d deletion more than its function as a past tense marker. In Table 20, the tabulations are given on the basis of this breakdown. Since the only cross-products

Table 20. Effect of grammatical function on the frequency of ∅ realization for potential *d* for Puerto Rican informants.

	___##V				___##-V			
	Stressed		Unstressed		Stressed		Unstressed	
	Past	Nonpast	Past	Nonpast	Past	Nonpast	Past	Nonpast
No. del./Total	6/31	0/4	3/11	2/8	9/26	5/8	6/10	32/44
% del.	19.4	0.0	27.3	25.0	34.6	62.5	60.0	72.7

Total Past Del./Total	% Del.	Total Nonpast Del./Total	% Del.
24/78	30.8	39/64	60.9

applicable to this categorization are for grammatical *d*, only those figures are given for this category, broken down in terms of the previously cited constraints.

Because of the limited numbers of examples in some categories, it is somewhat difficult to find the ordered progression of numbers that is typical of other constraints. Nonetheless, when we look at the categories in which there are sufficient examples, it appears that there is a significant difference, particularly if we look at the total numbers of examples combining the various categories. One word of caution, however, should be given before concluding that it is quite clear-cut. In the ___##-V, Unstressed, Nonpast environment, we note that 32 of 44 examples indicate *d* deletion. But included in this number are 23 examples of the derived adjective *colored*, all of which indicate deletion. The elimination of this one item, which may be a lexical difference rather than a phonological deletion, would make the differences between the two grammatical categories much less clear-cut.

The way in which we have set up Table 20 indicates that we consider the constraint of grammatical category to be the fourth order constraint, ordered after following vowel/nonvowel, stressed/unstressed, and grammatical/nongrammatical. Because of the limited numbers of examples in some categories and the logical impossibility of some vital cross-products, it is difficult to arrive at a clear-cut decision concerning the ordering of constraints here. Fasold (1972:47) in his analysis of constraints on d deletion in Black English, has suggested that the grammatical function of d is ordered before stress. However, his total number of grammatical examples of d is actually less than the total we have analyzed here, so that some of his important categories for determining the ordering of constraints are only sparsely populated[2]. On the basis of our comparison of data here, we may cautiously suggest that grammatical category is to be ordered as the fourth order constraint.

The hierarchical ordering of the four constraints that we have isolated so far is illustrated in Figure 5, using the figures derived in Tables 17-20.

Following the conventions we have used for incorporating the hierarchical ordering of constraints into a grammar of PRE phonology that formally admits variability, we can summarize our conclusions concerning the effect of various constraints on d deletion by the following rule:

$$(38)\quad \mathrm{d} \rightarrow (\emptyset) \;/\; \begin{bmatrix} \mathrm{V} \\ \\ \mathrm{B}\ \text{-stress} \end{bmatrix} \Gamma\text{-}\# \;\underset{[\Delta\ \text{-PAST}]}{\underline{\qquad\qquad\qquad}}\; \#\#\mathrm{A}\ \text{-V}$$

This rule indicates that the first order constraint is whether the underlying //d// is followed by vowel/nonvowel; second order, whether the preceding vowel is stressed/unstressed; third order, whether it follows an internal/noninternal word boundary; fourth order, whether it functions as a past/nonpast marker. Implicit in the use of the capital Greek prescripts is the fluctuation of the plus or minus values. The value that is given in the formalization of the constraint favors the operation of the rule, while the opposite value inhibits it. Thus, for example, if the value of the following vowel is -, as stated in the rule (##A-V), the deletion rule is favored, but if it is +, then it is inhibited[3]. As with the

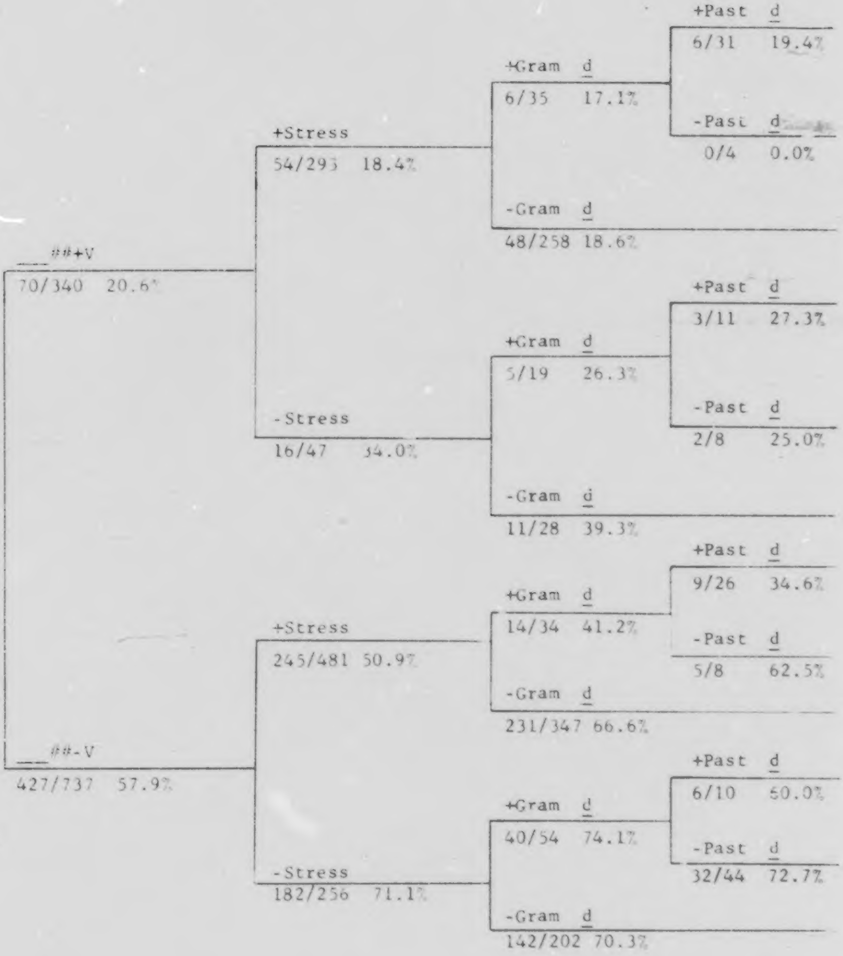

___##+V
70/340 20.6%
+Stress
54/293 18.4%
+Gram d
6/35 17.1%
+Past d
6/31 19.4%
-Past d
0/4 0.0%
-Gram d
48/258 18.6%
-Stress
16/47 34.0%
+Gram d
5/19 26.3%
+Past d
3/11 27.3%
-Past d
2/8 25.0%
-Gram d
11/28 39.3%
___##-V
427/737 57.9%
+Stress
245/481 50.9%
+Gram d
14/34 41.2%
+Past d
9/26 34.6%
-Past d
5/8 62.5%
-Gram d
231/347 66.6%
-Stress
182/256 71.1%
+Gram d
40/54 74.1%
+Past d
6/10 60.0%
-Past d
32/44 72.7%
-Gram d
142/202 70.3%

Figure 5. Hierarchical ordering of four constraints on *d* deletion for Puerto Rican informants.

other variable rules states, the relation of variable constraints in terms of favoring and inhibiting deletion should be read following the principle of geometric ordering: that is, the relative frequency of constraints should be read as follows:

Constraint Rank

A	B	Γ	Δ
-V	-Stress	-#	(Does not apply) >
-V	-Stress	+#	- Past >
-V	-Stress	+#	+ Past >
-V	+Stress	-#	(Does not apply) >
-V	+Stress	+#	- Past >
-V	+Stress	+#	+ Past >
+V	-Stress	-#	(Does not apply) >
+V	-Stress	+#	- Past >
+V	-Stress	+#	+ Past >
+V	+Stress	-#	(Does not apply) >
+V	+Stress	+#	- Past >
+V	+Stress	+#	+ Past

The incidence of deletion is greatest when all the values are identical to those given in the formalization, and least when all the opposite values obtain.

5.3 The incidence of Ø for underlying //t//. Up to this point, we have only looked at Ø realization with respect to //d//. But it can also be noted that there is some deletion of underlying //t// in words such as [kæ] 'cat', [ræbI] 'rabbit', and [ra^{e}] 'right'. The frequency for t deletion is given in Table 21. The figures are broken down on the basis of whether the following environment is vocalic or nonvocalic, since we previously observed the importance of this distinction for d deletion.

Table 21. Frequency of Ø realization for potential *t* when followed by a vowel or a nonvowel for Puerto Rican informants.

	___##V	___##-V
No. del./Total	49/459	219/617
% del.	10.7	3[illegible].5

The above table plainly indicates a constraint on *t* deletion that is quite identical to that which we observed for *d* deletion, namely, that a following nonvowel favors deletion greatly over a following vowel.

Since there are obvious similarities in terms of the output of phonological realizations for *d* and *t*, we may ask what the relation of these two types of processes is, and how *t* deletion may fit into the constraints we already established for *d*. Of the four constraints we have already isolated for *d*, only the following vowel/nonvowel and the stressed/unstressed syllable can be investigated for *t* since postvocalic *t* cannot have any grammatical function. It is, however, possible that there is a constraint based on whether the underlying alveolar is //t// or //d//. The figures for these three potential constraints are given in Table 22.

Several observations can be made on the basis of Table 22. First, the way we have set up the table indicates that the first order constraint for alveolar stop deletion is the following environment. An examination of the cross-products further indicates that the second order constraint is whether the underlying form is //t// or //d//. A comparison of the figures clearly indicates that *d* favors the operation of the deletion rule over *t*. The influence of stress does not show up for *t* as clearly as it does for *d*, but this may be due to the fact that there are relatively few examples of *t* in unstressed environments.[4] If stess is a constraint on *t* deletion as it is

Table 22. Frequency of ∅ realization for potential *t* and potential *d* in stressed and unstressed environments for Puerto Rican informants.

___##V

	t		*d*	
	Stressed	Unstressed	Stressed	Unstressed
No. del./Total	46/445	3/15	54/293	16/47
% del.	10.3	20.0	18.4	34.0

___##-V

	t		*d*	
	Stressed	Unstressed	Stressed	Unstressed
No. del./Total	16/44	204/573	245/481	182/256
% del.	26.4	35.6	50.9	71.1

for *d*, we would clearly expect that it is a minor one. It is obviously ordered after the following vowel/nonvowel and the voiceless/voiced constraints.

The generalization of the deletion rule to include *t* as well as *d* means that we will have to revise Rule (38). The effect of whether the underlying source is //t// or //d// also will have to be incorporated into the variable constraints. Our rule is now stated as:

$$(39)\quad \begin{bmatrix} -\text{voc} \\ -\text{cont} \\ +\text{ant} \\ +\text{cor} \\ -\text{nas} \end{bmatrix} \rightarrow (\emptyset) \;/\; \begin{bmatrix} \text{V} \\ \Gamma\ -\text{stress} \end{bmatrix} \quad \Delta\ -\#\begin{bmatrix} \overline{\text{B}\ +\text{v}}\text{oice} \\ \text{E}\ -\ \text{PAST} \end{bmatrix} \#\#\ \text{A}\ -\text{V}$$

It should be noted that because of the way we have written Rule (39) it only handles the case of alveolar deletion following a vowel (or constricted *r*). Some treatments of alveolar deletion have incorporated it as part of a more general rule, including *d* that is part of a consonant cluster as well as *d* that follows a vowel. This is what Labov (1969:748) has done, as indicated in the following rule:

$$t,d \rightarrow (\emptyset) / \begin{bmatrix} \alpha\text{cons} \\ \cdot \\ \cdot \\ \cdot \end{bmatrix} v(\#) \;\_\_\_\; \beta(\sim V)$$

Although consonant cluster reduction is an integral part of PRE (see Wolfram 1971:356-60), we have chosen to keep the two rules separate here. In part, this is due to the fact that consonant cluster reduction can affect all final stops in which the members of the cluster share the feature of voicing (Wolfram 1969:51). This means that clusters such as sp, ld, st, sk, etc., can be accounted for by a general consonant cluster reduction rule. The way Labov (1969) has set up the rules, clusters involving t and d are accounted for in the same rule as t and d following vowels; he needs another rule to account for the reduction of clusters such as sk, sp, etc. By setting up the t and d deletion rule following vowels separately, the consonant cluster rule can operate more generally. Another motivating factor in setting up the rule differently is found in the different orders of constraints. The ordering of constraints for t and d deletion following a vowel appears to be somewhat different from the ordering of constraints for consonant cluster reduction. We could, of course, set up a disjunctive rule to handle this discrepancy, but this is not a great deal more economical when we consider the additional rule that is still needed to handle other types of consonant cluster reduction. Until we have additional motivation, then, we will keep these two rules apart.

It should also be noted that we have chosen to represent the Ø realizations for t and d as deletion processes rather than as assimilation and subsequent degemination. Bailey (1969b) considers standard English to assimilate t and d to following labials and velars, e.g. righk kite, goob bye. The fact that we get deletion before vowels and pauses as well as consonants, however, cautions us against this interpretation for PRE. Although it might still be possible to write the rule as involving assimilation, if we followed Bach and Harms (1972) "crazy rules", this solution does not seem very satisfying. In particular, deletion preceding a pause seems to militate against interpreting it as assimilation in PRE. Furthermore, the generality of *Ø* realization before any consonant appears to be more characteristic of deletion than of assimilation.

5.4 *The comparison of d and t deletion in Puerto Rican and Black English*. In the course of our previous discussion, we have mentioned the fact that *d* and *t* deletion has been described for Black English in several different geographical locations, including Washington, D.C., Detroit, and New York City. On this basis, we may conclude that a certain amount of this deletion is an integral part of Black English. Since the surrounding black community is the main source of non-Puerto Rican contact, it is therefore important to compare *d* and *t* deletion for these two populations in order to see if we can attribute this process in PRE to linguistic assimilation to the surrounding community. In Table 23 we compare the tabulations of *d* deletion for the Puerto Rican and the black informants in our corpus. In this table, we have broken down the figures on the basis of only three environmental categories: following vowel/nonvowel, stressed/unstressed syllable, and grammatical/nongrammatical function of *d*.

Where there are sufficient numbers of examples to allow comparison, it is obvious that *d* deletion is much more frequent in Puerto Rican English than it is in Black English. If we collapse the distinction between grammatical and nongrammatical functions of *d*, because of the paucity of examples of grammatical *d* in some of the above categories, we find that

Table 23. Comparison of d deletion for Puerto Rican and black informants.

	___##V				___##-V			
	Stressed		Unstressed		Stressed		Unstressed	
	Gram.	Nongram.	Gram.	Nongram.	Gram.	Nongram.	Gram.	Nongram.
Puerto Rican								
No. del./Total	6/35	48/258	5/19	11/28	14/34	231/447	40/54	142/202
% del.	17.1	18.6	26.3	39.3	41.2	51.7	74.1	70.3
Black								
No. del./Total	0/14	10/93	1/2	4/22	14/33	62/183	3/10	35/69
% del.	0.0	10.8	50.0	18.2	42.4	33.9	30.0	50.7

there is a clear-cut difference in the degree of deletion for the two groups for all environments. This combination of categories is given in Table 24.

Table 24. Comparison of d deletion combining grammatical and nongrammatical functions of d for Puerto Rican and black informants.

	___##V		___##-V	
	Stressed	Unstressed	Stressed	Unstressed
Puerto Rican				
No. del./Total	54/293	16/47	245/481	182/256
% del.	18.4	34.0	50.9	71.1
Black				
No. del./Total	11/107	5/24	76/216	38/79
% del.	10.3	20.8	35.2	48.1

Table 24 leaves little doubt that d deletion is considerably more frequent in the speech of Puerto Ricans than of blacks. If Puerto Ricans have the deletion rule much more frequently than blacks, we may ask whether this rule can be attributed simply to the influence of the surrounding linguistic community. In the previous discussion of morpheme-final θ we observed that the assimilation variant is found to a significantly lesser degree in the Puerto Rican community. If the realization of f for underlying θ is a typical case of assimilation, and it appears to be so, then d deletion cannot be attributed simply to assimilation from the surrounding black community.

At this point we must turn to the possible influence of Puerto Rican Spanish that is carried over in the speech of second generation Puerto Ricans. As we have mentioned previously, one of the characteristic features of Puerto Rican Spanish is the deletion of underlying /d/ in syllable-final position. (As in English, this is not a categorical process, but a variable one.) There are, then, two possible sources for d deletion: the surrounding black community and Puerto Rican Spanish. We can hypothesize that it is the convergence of these sources, rather than one source alone, that accounts for the higher incidence of deletion among Puerto Ricans than blacks.

The possible convergence of sources for d deletion can be examined further by isolating the Puerto Rican informants who have extensive black contacts from those who have restricted black contacts. Table 25 gives the breakdown of deletion on the basis of three groups: blacks (BL); Puerto Ricans with extensive black contacts (PR/BL); and Puerto Ricans with restricted black contacts (PR). The figures are broken down on the basis of the following environment and the stress of the preceding vowel, as was done in Table 24.

The figures in Table 25 indicate that, with one exception, the incidence of deletion is greatest for the PR/BL's, next greatest for the PR's, and least for the BL's. The one exception, ___##V in an unstressed syllable, is found in the category with the smallest number of examples, which probably accounts for the discrepancy. We may hypothesize that the figures for the PR/BL group are due to the fact that these speakers are reinforcing the process of deletion that they may assimilate on the basis of their close contacts with blacks with a process that might be attributable to Spanish influence.

Table 25. Comparison of d deletion for BL, PR/BL, and PR informants.

	___##V		___##-V	
	Stressed	Unstressed	Stressed	Unstressed
BL				
No. del./Total	11/107	5/24	76/216	38/79
% del.	10.3	20.8	35.2	48.1
PR/BL				
No. del./Total	17/64	3/14	54/95	59/75
% del.	26.6	21.4	56.8	78.7
PR				
No. del./Total	37/229	13/33	191/386	123/181
% del.	16.2	39.4	49.5	68.0

In the preceding discussion, we have restricted ourselves to the comparison of d deletion for the Puerto Rican and the black groups. But we can also look at these groups with respect to t deletion. In Table 26 the figures for t deletion are given for the black group and the two Puerto Rican groups delimited above. Due to the small number of examples in unstressed syllables, we will break down the environments only on the basis of whether the following segment is vowel or nonvowel.

Several observations can be made on the basis of Table 26. First, both Puerto Rican groups reveal a higher frequency of t deletion than does the black group. Just as for d, there is some explanation for this higher frequency when we look at possible influence from Spanish. Word-final t in Spanish is a relatively rare occurrence, so that we might expect a Spanish speaker to realize Ø for t in word-final or syllable-final position. However, when we compare the two Puerto Rican groups,

Table 26. Comparison of *t* deletion for BL, PR/BL, and PR informants.

	___##V	___##-V
BL		
No. del./Total	12/184	53/255
% del.	6.5	20.8
PR/BL		
No. del./Total	19/98	40/119
% del.	19.4	33.6
PR		
No. del./Total	30/362	180/498
% del.	8.3	36.1

we find that the PR/BL group does not exceed the PR group in both categories. Unlike the case of *d*, this does not seem to be due to the limited number of examples, since both groups appear to have sufficient numbers of examples for a clear-cut pattern to emerge. If the difference between the two Puerto Rican groups in other instances is the result of the influence of Black English on the PR/BL's, then the fact that postvocalic *t* deletion is a relatively restricted phenomenon in Black English may account for the lack of differentiation in the frequencies of PR and PR/BL groups in this instance.

5.5 *-ɨd absence*. Until now, the only mention we have made of the morphophonemic realization *-ɨd* for the *-ed* suffix has been in connection with the rule that deletes the final *d*, so that we have items like [rɛ$^{\breve{I}}$dɨ] and [čitɨ] for *raided* and *cheated* respectively. The absence of *d* in these instances has been tabulated along with other examples of potential *d* in unstressed syllables. But it is also noted that there are instances in which the entire morphophonemic form appears to be absent. Fasold (1972:41) has noted the same type of absence in both Black English and standard English. These instances are accounted for by several types of phonological processes.

To state it briefly, Fasold (1972) has suggested that instead of a simple phonological process that deletes the entire *-ɨd* form, there is a series of phonological processes that accounts for this phenomenon. Some instances of absence preceding a vowel, e.g. *precede it* and *invade it* for *preceded it* and *invaded it* respectively, can be attributed to the *d* deletion described previously and the subsequent assimilation of the remaining vowel *ɨ* to the following vowel. Fasold further suggests that for cases in which base-final *t* or *d* is preceded by a consonant, e.g. *expect*, *bust*, *-ɨd* absence may result from the fact that these items are interpreted as ending only in the first member of the cluster. If this is the case, the *-ɨd* forms are absent because of the morphophonemic restriction of *-ɨd* to base forms ending in *t* or *d*. Other cases, Fasold argues, are accounted for by deletion of the vowel and subsequent degemination or assimilation of the remaining *d*. When vowel deletion takes place, the base-final *t* or *d* is contiguous to the remaining *d*. If the base ends in *t*, an assimilation of *t* to *d* may take place (giving [hɛ^{I}d] for *hated* and [t^{h}rid] for *treated*), and if *d* is contiguous to a *d*, degemination may take place (giving [rɛ^{I}d] for *raided*). The particular rules through which Fasold eventually arrives at *-ɨd* absence in the surface realization will not concern us here; thus, we will make no attempt to summarize Fasold's specific rules and rule orderings[6]. What is of interest here is the fact that through a series of phonological rules, it is possible to account for the resultant loss of a syllable in the surface realization.

The first type of process Fasold mentions, i.e. the assimilation of a vowel after *d* deletion that places *ɨ* contiguous to another vowel, is not found in our corpus. Since Fasold mentions that this occurs relatively infrequently, we cannot be sure if this absence is accidental or significant. The second reason for -ɨd absence, i.e. the interpretation of a base-final cluster as containing only the first member, is documented by only two examples:

(40) a. Like I used to be the war counselor... so it all depend on what happened in the first place. (35:14)

b. ...they could have arres' me. (31:10)

Fasold notes that absence of this type is also to be expected quite infrequently, and our data support this observation for PRE.

Although there are a number of different contexts in which deletion of the vowel and subsequent assimilation or degemination of the remaining d, the third type of process (or, more correctly, processes) occurs, there is one context in which surface syllable reduction is quite common, namely, when the verb is followed immediately by a gerundive nominal. Specifically, this involves one verb, start, in sentences such as:

(41) a. He star(d) talking to my mother.

b. He star(d) coming every day.

There are actually three types of realizations that can be observed in the monosyllabic realization of this form: star (or phonetically [sta:]), start, or stard. In Table 27, we have separated the frequency of syllable loss for the BL, PR/BL, and PR informants into two main categories: (1) instances in which start is monosyllabic, i.e. [sta(r)], [sta(r)t], or [sta(r)d]; (2) instances in which it is bisyllabic, i.e. [sta(r)tɨ] or [starɨ].

There is an obvious difference in the realizations of started as monosyllabic or bisyllabic, particularly when we compare the informants with the BL informants. The difference in the realizations between these groups is quite significant

Table 27. Comparison of monosyllabic and bisyllabic realizations of *started* in gerundive nominal constructions for BL, PR/BL, and PR informants.

	Monosyllabic	Bisyllabic	% Monosyllabic
BL	20	11	64.5
PR/BL	4	4	50.0
PR	17	46	27.0

(Chi square $p < .001$). Although there are too few examples for the PR/BL informants to come to clear-cut conclusions, the frequency of monosyllabic forms falls between the two groups, as we might expect.

We may hypothesize that the relative infrequency of the monosyllabic realizations of *started* is due to the difference in the tendency to reduce syllables as observed in Spanish and English. There is a well-known tendency in English, an accent-timed language, to reduce the vowels in unstressed syllables and, in some instances, to completely elide entire syllables in unstressed environments. In Spanish, a syllable-timed language, vowels in unstressed syllables do not reduce as they do in English, and the tendency to elide complete syllables is much weaker. This tendency, then, may be the reason that there is a significant difference between the incidences of monosyllabic realizations of *started* when the black informants are compared with the Puerto Rican informants. To verify this hypothesis to our complete satisfaction, however, we would need to compare the incidence of monosyllabic realizations for *started* in standard English and in other nonstandard varieties of English.

Before concluding our discussion of *-ɨd* here, we must mention two types of *-ɨd* presence where it is not normally expected in standard English. First, we observe several instances in which -*ɨd* is realized as a suffix on a base ending in *t* or *d* when the corresponding standard English construction does not distinguish between past and present tense forms of the verb. We thus have:

(42) a. ...and it hurted. (22:2)

b. I gotted a thirty-five. (44:3)

This type of -*ed* form is obviously an analogical formation on unmarked past tense verbs ending in *t* or *d*, and is not unique to PRE. Several instances of this analogical formation are found for the BL informants as well, e.g. *they betted on him* (1:2); it also can be observed in various nonstandard white dialects (and, perhaps, in some standard dialects as well).

The other type of -*Ɨd* formation has not, to my knowledge, been observed in other nonstandard dialects of English. This is the double or pleonastic marking of the -*ed* suffix, as in:

(43) a. ...right there it endeded. (29:3)

b. ...to see what they wanteded to do. (22:5)

c. ...he commandeded the seventy-three. (43:6)[7]

This pleonastic -*ed* marking appears to be a type of structural hypercorrection that occurs as a compensation for the English tendency to elide syllables. On the whole, this type of hypercorrection is quite infrequent, although there is one speaker in our corpus (Informant 29) who has pleonastic -*ed* marking on five out of seven potential instances of -*ed*, as illustrated in the following examples:

(44) a. ...and so they starteded running and Taylor's friend got shot. (29:2)

b. ...and they starteded running. (29:2)

c. ...and they wanteded to attack them. (29:3)

d. ...right there it endeded. (29:3)

e. ...they wanteded to fight for Leemen Village territory. (29:5)

Although this type of hypercorrection may be expected infrequently for some PRE speakers, the relative frequency of usage by this informant appears to be quite unusual and may be idiosyncratic.

5.6 The incidence of t for underlying /d/. In the above discussion, we have dealt only with various aspects of underlying /d/ and /t/ deletion. But we observed at the outset that it is also possible to realize /d/ as t. Phonetically, this may be an unreleased voiceless alveolar [t̚], a glottal stop [ʔ], or a co-articulated glottal and unreleased alveolar stop [ʔt̚]. This feature, sometimes referred to as devoicing, should not be confused with the lack of voicing through the voiced stops in standard English (sometimes represented as [d̥]). Perceptually, these two types of devoicing appear to be quite distinct. Previous studies of devoicing, done exclusively on Black English (Wolfram 1969 and Fasold 1972), have indicated that it is a process that applies to many more consonants than just d; in fact, it is true of all voiced obstruents to some extent. The realization of t for /d/ in word-final position has also been mentioned as a possible interference variant from Spanish because of the lack of contrast between d and t in word-final position in Spanish. As an interference variant, however, it does not appear to occur very extensively for most speakers.

In Table 28, we have tabulated the frequencies of t, i.e. [t̚], [ʔ], or [ʔt̚], realization for underlying /d/. The percentages of t realization are calculated in relation to the total number of t and d realizations. Cases of Ø realization treated previously are not considered in this table. Two environments are distinguished, vocalic and nonvocalic. It should be noted that our definition of following vocalic environment is quite rigid, so that any slight pause between potential d and a following vowel is classified as nonvocalic. We will see that this careful discrimination of pause following potential d is of particular importance because of the effect of the constraint of pause on the incidence of t. The category t includes [t˺], [ʔ], and [ʔt˺] phonetically; d includes [d], [d], and [d̥].

Table 28. Frequency of t realization for potential d in vocalic and nonvocalic environments for Puerto Rican informants.

	___##V	___##-V
No. t	9	134
No. d	261	176
% t	3.3	43.2

Table 28 indicates quite clearly that t realization of underlying d is a phonological process that is largely confined to nonvocalic environments. In fact, the incidence of t in vocalic environments is so limited that we may ask if the few instances that we have are a legitimate part of the dialect or some type of "speaker error". Typically, d is realized as a flapped alveolar [d] in intervocalic position. The low incidence of t preceding a vowel converges with the observation of d devoicing in both Wolfram (1969:99) and Fasold (1972:55). Although both of these studies mention the low incidence of t in vocalic environments, Fasold nonetheless considers that these rare instances should still be accounted for in the grammar of Black English. Fasold, in fact, regards it as important evidence for ordering the constraints on variability as he does, a matter which we will return to in more detail later.

One of the variable constraints mentioned in previous studies of devoicing is stress. It has been suggested (Wolfram 1969:102) that unstressed syllables favor the devoicing rule. In Table 29, we present frequencies of t realization based on the distinction between stressed and unstressed environments. Since we have already noted that t for d is almost categorically absent preceding a vowel, we will only give the incidence of t for d in nonvocalic environments.

Table 29. Frequency of t realization for potential d in stressed and unstressed environments for Puerto Rican informants.

	Stressed	Unstressed
No. t	94	40
No. d	142	34
% t	39.8	54.1

The observation of the influence of stress reported in previous studies of devoicing is confirmed in PRE. The realization of t for d is favored in unstressed environments and inhibited in stressed ones.

Another factor that has been observed to influence the relative frequency of t in nonvocalic environments is the distinction between underlying /d/ followed by a consonant and that followed by a pause of some type. Pause is seen to favor the incidence of t (Wolfram 1969:101). In Table 30, the effect of this constraint is considered. Terminal pause and nonterminal pause (any hesitation following potential d) are not distinguished in our tabulations. Tabulations are broken down into stressed and unstressed environments on the basis of our previously determined constraint.

There is an obvious effect on t realization based on the distinction between a following pause and a following consonant, but the ordering of the constraints is somewhat unclear. The implied order in Table 30 is that stress is hierarchically ranked before the following pause, but the two crucial cross-products for this decision, i.e. Stressed, ___// and Unstressed, ___##C, are so close that there is no significant difference. The difference between Stressed, ___##C and Unstressed, ___//

is significant, but since these are not the crucial cross-products to compare when determining the ordering of constraints, any decision about ordering will have to be somewhat arbitrary.

Table 30. Frequency of t realization for potential d in four environments for Puerto Rican informants.

	Stressed		Unstressed	
	___##C	___//	___##C	___//
No. t	37	57	10	30
No. d	50	92	14	20
% t	42.5	38.3	41.7	60.0

In Wolfram's (1969:101) study of constraints on t for d, the possibility of following voicing has also been investigated, but has been found to be of no consequence. A similar tabulation for these data in stressed syllables also reveals that it is of no significance. (In fact, t realization is slightly more frequent when followed by a voiced consonant than when followed by a voiceless one.) This, however, is contrary to Fasold's (1972) findings for devoicing in Washington working-class black speech. Our impression, then, is that if voicing is a constraint on t for d, it is a very minor one.

At this point, we can summarize the constraints that we have established in terms of a variable rule for devoicing, formalized as:

$$(45)\quad d \rightarrow t / \begin{bmatrix} V \\ A\ \text{-stress} \end{bmatrix} \quad \_\_\#\# \begin{bmatrix} -V \\ B\ \text{-segment} \end{bmatrix}$$

Several points need to be noted in our formalization of Rule (45). In the first place, we have written the rule so that it operates only in nonvocalic environments. This means that we are assuming that the phonological process is prohibited from operating before a vowel, i.e. an immediately following vowel without any intermittent pause. The rare cases of t before vowels which we mentioned earlier are dismissed as performance factors of some type. This decision is a statistical one, based on the fact that t for d preceding a vowel occurs in less than 5 percent of all cases. If we were to account for these infrequent instances in our formal statement, the distinction between following vowel/nonvowel would obviously be the first order constraint.

The hierarchy of constraints formalized here is quite different from the one suggested by Fasold (1972:47) for Black English. Fasold suggests that the first order constraint is voicing/voicelessness, the second order constraint is the absence/presence of a vowel, and the third order constraint is the presence/absence of a pause. He does not mention the possible constraint of stress, presumably because there are too few examples in his data for him to make his calculations so detailed. Although his suggested hierarchy of constraints would, on the surface, appear to be radically different from the one suggested here, some of this is due to his interpretation of the distinction between a following vowel/nonvowel as a genuine constraint on variability. Once he concludes that vowel/nonvowel is a legitimate constraint, he unites the voicing of the following vowel (since in English all vowels are voiced) and the voicing of the following consonants together as the most inhibiting factor on d devoicing, whereas the lack of voicing is the factor that favors it most. If Fasold were to interpret the following vowel as categorically prohibiting devoicing, his constraints would be rearranged considerably and would not conflict seriously with the ones suggested here.

So far, we have not discussed the relation of the devoicing rule (Rule (45)) to the deletion rule (Rule (39)) outlined previously. Labov et al. (1968), in their treatment of these relations, consider the output of the devoicing rule applied to d to be a segment that merges with t. The t, d deletion rule then operates on the output of the devoicing rule. This is, of course, based on the assumption that the output of d devoicing is identical to that of t. Fasold (1972:50-53), however, raises the question of whether the phonetic outputs from underlying /d/ and /t/ are identical. He notes that two of the phonetic realizations of postvocalic, syllable-final /t/ and /d/ are identical, namely, the unreleased stop [t̚] and the glottal [ʔ]; the third variant, the co-articulated glottal and unreleased stop [ʔt̚], however, appears to be unique to the phonetic realization of underlying /d/. If we assume that Fasold is correct in his phonetic impressions, we can raise the question of why this devoicing is unique to /d/: is it a phonetic vestige of the underlying voiced segment, or is it due to some phonological environment that may characterize /d/ but not /t/? It has been pointed out in Wolfram (1970) that the lengthening of vowels that is characteristic before voiced segments in English is still retained when underlying /d/ is devoiced, giving phonetic items like:

(46) a. [mæːᵊʔt̚] 'mad'
b. [gaːʔt̚] 'God'

This phonetic realization, noted for Black English, is also characteristic of the PRE phonetic realizations of [ʔt̚].[8] Now, if this is the case, then it may be that the co-articulated glottal and unreleased stop is a function of length and cannot occur before underlying /t/. If we specify the [ʔt̚] realization as a function of preceding length, we can account for the realization of the unique variant for underlying /d/.

Although the preceding discussion may appear to open up the door for allowing d → t and t → ∅ as the logical relation of the two processes, we must not forget the different frequency distributions for the deletion of t and d. If we first change d to t, then we have difficulty accounting for the clear-cut preference for the deletion of underlying /d/ over /t/ (see

Table 22). We could revise our constraints so that preceding vowel length is an important constraint on the deletion of *t* in order to justify the relations Labov et al. (1968) originally suggested, but this solution seems to be somewhat ad hoc. Despite the apparent reasonableness of the step-wise gradation of devoicing from voicing through total deletion, we must conclude with Fasold that "devoicing and deletion are linguistically separate phenomena" (Fasold 1972:53).[10]

5.7 *The comparison of t for underlying /d/ in Puerto Rican and Black English*. We have previously mentioned that *t* for underlying /d/ is a characteristic of both Puerto Rican and Black English. In fact, the variants that are initially set forth for our analysis of *t* for underlying /d/ in PRE are precisely the ones that both Wolfram (1969) and Fasold (1972) have identified for Black English. It yet remains, then, to compare the incidence of *t* for underlying //d// among the Puerto Rican and black informants. This is done in Table 31 in which figures are given for stressed and unstressed syllables and for following consonant or pause.

As indicated in Table 31, the same general effect of environments is observed for the two groups. The major difference between the groups is found in the frequency: the black informants generally realize *t* more frequently than do the Puerto Ricans. Although we note that *t* is somewhat more frequent in Black English than it is in Puerto Rican English, we may recall that *Ø* realizations are more frequent in Puerto Rican English. We may then ask how the groups contrast when they are compared in terms of the total frequency of non-*d*, i.e. *t* or *Ø*, realizations. The figures for the two non-*d* realizations are given in Table 32. Figures are given only for stressed and unstressed environments preceding a non-vocalic environment.

Table 31. Comparison of t realization for potential d in four environments for Puerto Rican and black informants.

	Stressed		Unstressed	
	___##C	___	___##C	___
Puerto Rican				
No. t	33	57	10	30
No. d	50	82	14	20
% t	39.8	41.0	41.7	60.0
Black				
No. t	26	41	11	16
No. d	39	34	7	7
% t	40.0	54.7	61.1	69.6

Table 32. Comparison of total non-d realizations in stressed and unstressed environments for Puerto Rican and black informants.

	Stressed				Unstressed			
	Ø	t	Total Non-d	/d/	Ø	t	Total Non-d	/d/
Puerto Rican								
No.	245	90	335	481	182	40	222	256
% of d	50.9	18.7	69.6		71.1	15.6	86.7	
Black								
No.	76	67	143	216	38	27	65	79
% of d	35.2	31.0	66.2		48.1	34.2	82.3	

Table 32 indicates that the two groups do not differ significantly in terms of the total non-d realizations. However, they do differ in the types of realizations: Puerto Rican English shows the Ø realization significantly more frequently (Chi square p .001) than does Black English, whereas Black English realizes *t* more frequently.

Finally, we can look at the incidence of *t* realization for the BL, PR/BL, and PR informants. We hypothesize that PR/BL informants will use *t* more frequently than do the PR informants. Table 33, which compares the three groups, allows us to test our hypothesis. The realizations are compared in stressed and unstressed syllables and following consonant or pause.

Table 33. Comparison of *t* realization for potential *d* in four environments for BL, PR/BL, and PR informants.

	Stressed		Unstressed	
	___##C	___//	___##C	___//
BL				
No. *t*	26	41	11	16
No. *d*	39	34	7	7
% *t*	40.0	54.7	61.1	69.6
PR/BL				
No. *t*	6	15	5	6
No. *d*	8	9	3	2
% *t*	42.9	62.5	62.5	75.0
PR				
No. *t*	27	42	5	24
No. *d*	42	73	11	18
% *t*	39.1	36.5	31.3	57.1

Despite the few examples in some of the categories delimited in Table 33, our hypothesis is confirmed: PR/BL informants do realize *t* more frequently than do PR informants. In fact, the figures for the PR/BL group exceed (but not to any degree of statistical significance) the frequency of *t* realization observed in the black group. We thus conclude that t realization is a feature that shows assimilation to Black English. For Puerto Ricans, one of the linguistic effects of extensive contacts with Black English speakers is the increased frequency of t realization.

5.8 Summary. In the preceding discussion, we have seen that alveolar stop deletion following vowels and d devoicing are an integral part of PRE. Unlike the case of θ, which we discussed in Chapter Four, these processes cannot be accounted for solely on the basis of assimilation to the surrounding Black-English-speaking community. Rather, there appears to be a convergence of a Black English phonological process and a process that might be attributed to the influence of Puerto Rican Spanish. Our conclusion that it is the combination of these sources that accounts for alveolar deletion is based on the frequency distribution. If deletion were due simply to Puerto Rican Spanish interference phenomena, we would not expect the high frequency level of occurrence, since straightforward interference for these informants tends to be very low, so low that we previously labeled it vestigial interference. On the other hand, if it were due simply to assimilation to the black community, we would not expect both those Puerto Ricans with extensive black contacts and those with restricted black contacts to exceed the frequency of occurrence found among Black English speakers. But both groups have considerably more alveolar stop deletion than the black group. We therefore conclude that the phonological processes in Black English and Puerto Rican Spanish are converging to account for the incidence of deletion.

The process of d devoicing may also be due, in part, to converging processes, but it appears to be more sensitive to assimilation to the black community than is deletion. This conclusion is again based on the frequency levels: the frequency levels for this feature indicate that Puerto Ricans with extensive black contacts may have a higher incidence of devoicing than do speakers from the surrounding Black English community, but that Puerto Ricans with restricted black contacts typically have a lower incidence than is found in Black English.

There are two rules that are needed to formally account for deletion and devoicing in PRE:

(47) $$\begin{bmatrix}-\text{voc}\\ -\text{cont}\\ +\text{ant}\\ +\text{cor}\\ -\text{nas}\end{bmatrix} \rightarrow (\emptyset)\ /\ \begin{bmatrix}\text{V}\\ \Gamma\ -\text{stress}\end{bmatrix}\ \Delta\ -\#\ \begin{bmatrix}\rule{2cm}{0.4pt}\\ \text{B}\ +\text{voice}\\ \text{E}\ -\ \text{PAST}\end{bmatrix}\ \#\#\ \text{A}\ -\text{V}$$

(48) $$\begin{bmatrix}-\text{voc}\\ -\text{cont}\\ +\text{ant}\\ +\text{cor}\\ -\text{nas}\end{bmatrix} \rightarrow ([-\text{vd}])\ /\begin{bmatrix}\text{V}\\ \text{A}\ -\text{stress}\end{bmatrix}\ \rule{1cm}{0.4pt}^{\#\#}\ \begin{bmatrix}-\text{V}\\ \text{B}\ -\text{segment}\end{bmatrix}$$

Both of these rules have a number of variable constraints on their occurrence, demonstrating the regular patterning of variability in PRE that matches variability studies in other settings. Although it may be tempting to suggest that deletion operates on t after d has been devoiced to t, the evidence does not support this conclusion. Linguistically these two rules are quite independent, and we suggest that deletion should be ordered before devoicing.

NOTES

1. What is transcribed here as a voiced stop often fades into voicelessness $[\underset{\circ\rightarrow}{d}]$. This is to be clearly differentiated from the variants of t.

2. The way in which Fasold (1972) uses the evidence from his application of statistical tests to support his claims about the validity of his constraints on variability can be quite misleading. He applies the Chi square test of statistical significance (which is, in itself, a very weak

statistical calculation) for each major constraint he isolates for *d* without reference to the intersection of other constraints. For example, he applies Chi square to the category past-tense use of *d*, as opposed to other grammatical functions of *d*, without breakdown into other constraints he has isolated, such as the distinction between *d* in vocalic and nonvocalic environments. Therefore, when he concludes that the distinction between past and other grammatical functions of *d* is significant, we cannot be sure if this is a function of intersecting constraints that he has not isolated, e.g. the fact that one grammatical category may represent more instances in which it is followed by a vowel. Curiously, his summary of the different intersecting constraints neither gives the raw figures nor applies any statistical test of significance (there is no way of retrieving them from the other tables). It is in this summary table that the breakdown of raw figures and the application of statistical tests are most essential in assessing the validity of the conclusions he draws from the data.

3. By using the symbol ~ to refer to the absence of something, e.g. ~V, Labov has made it possible to regularize the conventions so that plus (+) always favors and minus (-) always inhibits the incidence of rule application. Fasold (1972) has suggested that the use of ~ to indicate the absence of something is preferable to simply + or - because technically it is the absence or presence of environments rather than the plus or minus values that affects variability.

4. In our tabulation of stressed and unstressed environments for *t*, we counted only the incidence of *t* in unstressed syllables or polysyllabic words. It is suspected that if we had taken unstressed syllables in terms of the context of phrasal stress, our figures might be more convincing.

5. It is possible that there are some special cases in which an assimilation process may be operating. For example, with the item *let me*, we get [lɛmmi] in the majority of cases. If we do interpret this as assimilation, it appears that this type of assimilation is quite lexically restricted.

6. For a comprehensive summary of the rules involved, see Fasold (1972:99-114).

7. Although it might be suspected that these forms are cases of *verb* + *ed* and the pronoun *it* (which could have the same

phonetic realization), the broader context of these utterances does not indicate that this is the case.

8. Although we have not done specific tabulations of the different phonetic realizations of the variant, it appears that [ˀt˺] is considerably more frequent among Black English speakers than it is among Puerto Rican English speakers.

9. Such a decision would have to be based on the assumption that this sort of phonetic detail is available at this stage in the phonological rules. In most analyses, this is information that would come in lower level rules than the ones we are discussing here, and hence would not be available as environmental conditioning.

10. The important principle that emerges from these relations is that variable frequencies may provide important evidence for "feeding" relationships and rule ordering. This will be discussed in detail in a future paper.

6 NEGATION

After looking exclusively at phonological aspects of PRE in the previous two chapters, we turn our attention to a grammatical aspect of PRE. Our study of negation in this chapter will allow us to compare and extend some of the general principles that have emerged in our study of phonological variables. Like other nonstandard varieties of English, the treatment of negation in PRE is, in many respects, identical to its treatment in standard English. It is beyond the scope of this study to give a description of negation that would largely duplicate or summarize other descriptions of standard English negation[1]. In this chapter, we will deal only with those aspects of PRE that differ from standard English; standard English will be used only as a point of reference for the discussion of negation in PRE. Two main areas will be covered: (1) the use of certain negative particles; (2) the use of negatives with indefinites.

6.1 Negative particles. We will here concern ourselves with sentential negation when the negative particle stands alone or is attached to auxiliaries or the copula. (Its attachment to indefinites and adverbs will be discussed in Section 6.2.) The various morphophonemic realizations of the negative particle are discussed under the alternant forms.

6.1.1 The use of no. In the overwhelming number of cases that we have in our corpus, the particle *not* and its morphophonemic alternates occur with auxiliaries and copulas, the same way that they do in standard English. Thus, the following type of construction is commonplace:

(49) a. They won't be able to win. (5:3)
b. The cats can't get in the coop. (10:2)
c. Why don't you give those pants a break. (14:5)
d. He's not nuts. (28:8)

But there are several cases that depart from the standard English expectations in ways that are quite predictable from the use of the Spanish particle *no*. We have:

(50) a. He no have to pay nobody money. (27:10)
b. You no smell no nasty air. (44:5)
c. It no gonna get you nowhere. (11:12)
d. I no used to it. (22:11)

The uses illustrated in (50) can, of course, be related to the Spanish particle *no*, in Spanish sentences like:

(51) a. No va a la casa. 'He is not going to the house'.
b. No está aquí. 'He is not here'.

Several aspects of this apparent influence from Spanish must be mentioned. In the first place, the use of the particle *no* for sentential negation is quite rare in PRE. There are only 10 examples of this type in the entire corpus, representing less than 2 percent of all potential occurrences. Furthermore, only 5 of the 29 informants actually use the form, and even among these informants, it is used very infrequently. In fact, none of the speakers who uses it does so in more than 8 percent of all potential occurrences.

It is further observed that 6 of the 10 occurrences appear where *don't* might be used in standard English. This stands to reason when we observe that *don't* in some nonstandard dialects can be realized as [ɔ̃$^{\tilde{u}}$n] and even [ɔ̃$^{\tilde{u}}$] because of the operation of phonological processes that reduce it (see Labov et al. 1968:257). This makes phonetic realizations of don't and no very close. The difficulty we faced in determining which form occurred for a number of cases in allegro speech is perhaps the best testimony of how close these can be.

There are also three examples of no used in a negativized copula, as in (50c) and (50d). In these cases, it is interesting to note that there is no surface realization of the copula. Also conspicuous by its absence is the change of linear order that might have been predicted from Spanish because the particle no is always preauxiliary. But there are no cases like:

(52) a. *He no can do it.
b. *He no is here.

Sentences like (52) are quite common negative patterns in the first stages of English acquisition by Spanish speakers, but they are not present at all in our corpus.

Although there are no examples of no for didn't, there are two cases in which not is used in a way that reflects this Spanish influence, as in:

(53) He not even missed one guy. (22:8)

The infrequent use of the particle no in a way that reveals Spanish influence indicates that it cannot be described as a characteristic of PRE. Even speakers who have it use it so seldom that it can hardly be considered an integral part of the varieties of PRE that we are dealing with here. The majority of cases in which it is used reflects a relatively unobtrusive use of no (for don't) because of phonetic similarity. We conclude, then, that the occasional uses of no are matters of vestigial interference that parallel the vestigial interference pattern we have already cited in our description of phonological variables.

6.1.2 The use of ain't. Ain't in PRE may have several different functions, and is used in a way quite similar to its uses in other nonstandard varieties of English, both white and black.

6.1.2.1 Ain't for $\begin{Bmatrix} \text{am} \\ \text{are} \\ \text{is} \end{Bmatrix}$ + not. In the first place, ain't may correspond to standard English $\begin{Bmatrix} \text{am} \\ \text{are} \\ \text{is} \end{Bmatrix}$ + not. This standard English negative construction may be alternately realized as (1) full copula and full negative: $\begin{Bmatrix} \text{am} \\ \text{are} \\ \text{is} \end{Bmatrix}$ + not; (2) contracted copula and full negative: $\begin{Bmatrix} \text{'m} \\ \text{'re} \\ \text{'s} \end{Bmatrix}$ + not; or (3) full copula and contracted negative: $\begin{Bmatrix} \text{aren't} \\ \text{isn't} \end{Bmatrix}$. We may get:

(54) a. I ain't a greedy guy. (9:10)
b. You ain't gonna do nothing to that problem. (14:4)
c. They know he ain't gonna beat him up. (9:4)

Although one might have the initial impression that ain't occurs almost categorically as a correspondent for the three alternative standard English types, its actual frequency is less than 50 percent of all potential occurrences, i.e. where one of the three types of standard English alternates may occur. But, as we shall see, there is considerable variety in the realization of the nonstigmatized alternatives.

In the first place, the full forms (am not, are not, and is not) are relatively rare in standard English and are used mostly for negative emphasis. In our corpus, the full forms are also quite infrequent; in fact, there are only three full negative + full copula forms that occur, and these seem to be used emphatically, as in:

(55) The winter is nót like here. (23:3)

This leaves the standard forms *'m*/*'re*/*'s* + *not* and *aren't*/*isn't* as the candidates for alternation with nonstandard *ain't*.[2] The alternation among those three types is shown in the following table:

Table 34. Frequency of *ain't* usage for Puerto Rican informants.

	No.	% of Total
'm/*'re*/*'s* + *not*	56	45.2
aren't/*isn't*	5	4.0
ain't	63	50.8
Total	124	

It should be obvious from the above table that the alternatives for our Puerto Rican informants are primarily *'m*/*'re*/*'s* + *not* and *ain't*. In fact, the incidence of *aren't*/*isn't* is so small that we can hardly consider it an integral part of the dialect of most speakers. *Aren't* does not occur at all in the corpus, so the conclusion about its status is self-evident. Although *isn't* accounts for all five occurrences of this type, one speaker is responsible for three of these. Based on other criteria, e.g. the fact that he has the second lowest frequency of multiple negation of all the informants, we can suggest that this speaker is not entirely representative of the nonstandard dialect(s) present in our corpus. We cautiously conclude that the rare occurrences of *isn't* are due to dialect importation from standard English. On the other hand, however, fluctuation between *'m*/*'re*/*'s* + *not* and *ain't* is inherently variable in the dialect(s) of our informants.

Having established the inherent variability of *'m*/*'re*/*'s* + *not* and *ain't*, we can now turn to possible constraints on the occurrence of these forms. For example, is there any constraint that might take the fluctuation between *'m*/*'re*/*'s* + *not* and *ain't* in the following sentence out of the realm of "random optionality", i.e. the absence of constraints on the relative frequency of occurrence?

(56) No, I'm not gettin' off this car; we ain't doin' nothin', we just sittin' down. (26:8)

One way in which we can break the variants down is according to the copula form to which not is attached, i.e. am, are, or is:

Table 35. Frequency of ain't usage for contracted copula + not for Puerto Rican informants.

	am	are	is
No. 'm/'re/'s + not	23	24	14
No. ain't	7	28	28
% ain't	23.3	53.8	66.7

The most striking difference shown in the above table is that between am and are/is (Chi square is $p < .01$), although there is also a minor frequency difference between are and is. In attempting to account for the most significant frequency difference, we must refer to our observation that ain't is used predominantly as a correspondent of standard English aren't and isn't. In current standard English, am + not does not have a parallel negative construction: that is, *amn't does not occur. We would expect less use of ain't where standard English has no corresponding contraction because of its predominant correspondence for negative contractions.

Another possible constraint that has been investigated with reference to the relative frequency of ain't is the influence of multiple negation: that is, when the negative concord rule has applied to a sentence, does this favor the occurrence of ain't? We may hypothesize that a sentence like:

(57) That man ain't nowhere in sight. (11:9)

in which the negative concord rule has applied, is more likely to contain *ain't* than is one in which the negative concord rule cannot apply, e.g. *He's not here now*. The following table summarizes the relationship between multiple negation and *ain't* in the data, dividing the structures on the basis of the contrast of *am*, *are*, and *is*, as suggested above:

Table 36. Frequency of *ain't* usage in multiple and nonmultiple negative clauses for Puerto Rican informants.

	Multiple Negative Clauses		Nonmultiple Negative Clauses	
	No. ain't/Total	% ain't	No. ain't/Total	% ain't
am	3/7	42.9	4/23	17.4
are	20/24	83.3	8/18	44.4
is	16/21	76.2	12/33	36.4
Total	39/52	75.0	24/74	32.4

The effect of multiple negation is to increase the likelihood of *ain't* occurrence. In fact, this constraint has a stronger influence than whether or not the form to which the negative is attached is *am*[9]. We thus conclude that the constraint of multiple negation is first order and that *+am* is second order. We may suggest the following hierarchical ordering for the constraints given in Table 36.

Formalizing the hierarchy of constraints into a rough approximation of the rule by which we derive *ain't* from $\left\{\begin{matrix} \text{am} \\ \text{are} \\ \text{is} \end{matrix}\right\}$ + *not*, we may get:

(58) $$\left\{\begin{matrix} \text{am} \\ \text{Bare} \\ \Gamma\text{is} \end{matrix}\right\} \rightarrow \text{ey} \ / \ \_\_\_ \ \text{not} \quad X \quad A[+\text{Neg}]$$

where +Neg and *not* are members of the same clause

This rule summarizes the geometrical ordering given in Figure 6: the first order constraint is whether ain't occurs in the context of multiple negation; the second order constraint, whether it is plus or minus underlying ARE; and the third order constraint, whether it is plus or minus underlying IS.

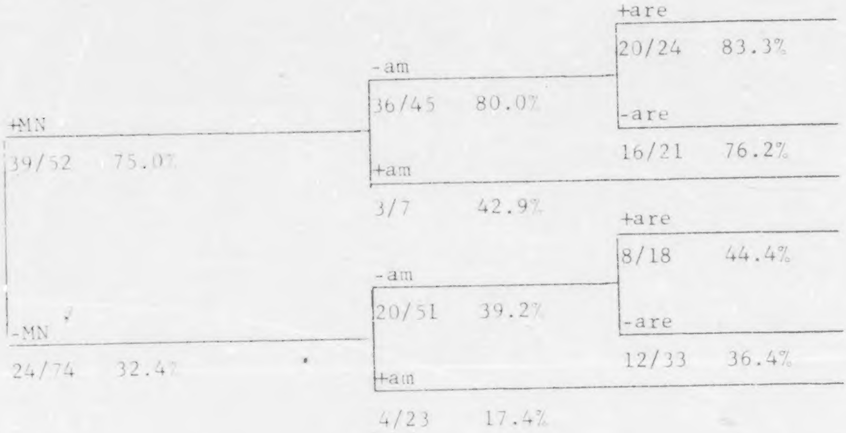


Figure 6. Hierarchical ordering of three constraints on ain't occurrence for Puerto Rican informants.

6.1.2.2 Ain't for have + not. As in other nonstandard English dialects, ain't can also be used in PRE as a correspondent for standard English have + not.

(59) I ain't been to no fight yet. (11:11)

But there also appears to be inherent fluctuation between this form and have + not; in fact two-thirds of all potential occurrences are realized by have + not.

(60) I haven't met their family. (18:8)

Most of our PRE speakers must be characterized as having this sort of variation inherent in their dialect.

Although we have too few potential occurrences of have + not to do an analysis of the contextual constraints on the frequency of ain't, which might parallel the analysis we did for $\left\{\begin{array}{c}\text{am}\\ \text{are}\\ \text{is}\end{array}\right\}$ + not, we might predict that the constraint of multiple negation would have a similar effect, i.e. raising the incidence of ain't. But, on the other hand, we would not expect person/number to be relevant to the variability of have + not and ain't, since there is no structural motivation of the type we presented earlier for am on which to base such a prediction.

6.1.2.3 Ain't with got. Ain't can also occur as a negativized auxiliary form with got as a main verb. We thus get:

(61) a. He ain't got no good education. (21:15)

b. He ain't got no clothes, wear no clothes. (42:2)

As we might suspect, this form also fluctuates with a less stigmatized variant. But instead of alternating with have + not or $\begin{Bmatrix}\text{am}\\ \text{is}\end{Bmatrix}$ + not, the predominant variation in this case is between ain't and do + not, because of the status of got as a main verb. We get:

(62) a. If you don't got nothing to do in the summer, you go to it. (22:11)

b. I don't got no time to play. (14:2)

Of the 13 examples of the Neg + got construction, 8 of them occur with don't and 5 with ain't.

6.1.2.4 Ain't for didn't. In addition to the previously mentioned uses of ain't, it is also observed that there are occasional uses of ain't as a correspondent of standard English didn't. We thus have:

(63) a. I ain't do this, I ain't do that. (18:5)

b. Taylor, he ain't jump, he was carried down. (29:2)

This type of correspondence, when tabulated for the entire Puerto Rican sample, accounts for only 5 percent of all potential occurrences. What is more important, however, is the fact that only 6 informants account for all occurrences of *ain't* for *didn't*, and for these informants, it is used in 33 percent of all potential occurrences.

Labov et al. (1968) observe that the use of *ain't* for standard English *didn't* is one aspect of *ain't* usage in which Black English differs from white nonstandard speech. It is therefore instructive to note that of the 6 speakers who account for all occurrences of *ain't* for *didn't*, 4 have extensive black contacts. We conclude that *ain't* for standard English *didn't* is a correspondent that is largely restricted to those speakers who have direct contacts with blacks. It is virtually nonexistent in the speech of Puerto Ricans with restricted black contacts.

6.1.3 *Pleonastic tense marking with didn't*. In negative sentences containing the auxiliary *didn't*, tense may be marked pleonastically in one variety of PRE: that is, tense may be marked both in the negativized auxiliary and in the main verb.[4] We get:

(64) a. I didn't did it. (27:8)
b. I didn't meant to say it that way. (11:5)
c. We didn't never called it a game. (20:2)

This type of pleonastic tense marking is found for a significant minority of the Puerto Rican informants (8 of 27 informants who have five or more potential occurrences of past tense negatives with *didn't*). Like other features which we have discussed, pleonastic tense marking is not categorical; it varies with the standard English forms of tense marking, as in:

(65) a. I didn't even give him carfare to their home. (27:12)
b. They didn't have what they usually have. (30:3)

The relative frequency of pleonastic tense marking for those speakers who use it ranges from 18 to 53 percent, but generally the standard English tense-marking convention appears to be more frequent than its nonstandard counterpart. (For those speakers who have at least one instance of pleonastic tense marking, 20 of the 56 potential occurrences (36 percent are realized with the double marking.)

In attempting to account for the occurrence of pleonastic tense marking, we apparently cannot turn to other nonstandard dialects of English, as we have done for some of our other features. In particular, there is no apparent influence from Black English to account for this phenomenon. Although Labov et al. (1968:259) and Fasold (personal communication) report that there is an occasional occurrence of this sort of form, both seem to think that it is a type of performance error rather than an integral pattern of the dialect. There are, furthermore, no instances of this type of construction by the black informants in our corpus and no correlation between its usage and the extent of black contacts on the part of the Puerto Rican informants. We can apparently, then, rule out the influence of surrounding nonstandard dialects to account for this phenomenon.

On the other hand, there is no direct influence from Spanish that might account for this pleonastic tense marking, since tense marking of this sort does not occur in Spanish. But the lack of isomorphic correspondence does not necessarily exclude indirect influence, e.g. hypercorrection, to account for these constructions. To begin with, we must note that in English, if there are no other auxiliaries, i.e. modal, have, be, in the verb phrase to which not can be attached, then do must be present. But in Spanish, there is no parallel requirement, so that we have:

(66) a. No hizo nada. 'He didn't do anything'.
b. El muchacho no vino. 'The boy didn't come'.

We see that in English, the tense is marked in the auxiliary in negative verb phrases, whereas in Spanish, since no auxiliary is required with negatives, it is marked in the verb.

This difference leads us to account for pleonastic tense marking by hypothesizing that there are several stages of interference that the Spanish speaker may go through in learning English. In the first stage, the Spanish speaker attempting to speak English might simply substitute the Spanish negative for the negativized past tense auxiliary, producing:

(67) He no eat the food.

for standard English 'He didn't eat the food'. It is important to note that the use of no for didn't leaves the sentences unmarked for tense. This seems to be a pidginized stage of language learning with respect to tense and negation.

Thus, a second stage might be hypothesized, in which the verb might take the tense marking in compensation for the fact that it is not attached to a negativized auxiliary. Realizing that there is no tense marking, a speaker might simply place the tense marker on the verb by analogy with the Spanish tense-marking scheme. This would result in:

(68) He no ate the food.

Finally, with the acquisition of the standard English didn't, the tense may still be retained on the verb, since the attachment of the negative to a tense-carrying auxiliary is not found in Spanish. This, then, gives us:

(69) He didn't ate the food.

In a sense, this sort of pleonastic tense marking is simply a type of hypercorrection, in which a false analogy results in the placement of a form where it is not required by the rules of the language.

Although the stages described above might give a reasonable explanation for the occurrence of pleonastic tense marking in PRE, the fact remains that this formation cannot simply be dismissed as language interference, and hence outside the scope of an adequate description of PRE. This feature must be described as an integral part of the tense system for one variety of PRE. Furthermore, it must also be pointed out that this is a new rule that cannot be derived simply by reference to the rules of English and Spanish. This rule, that copies the tense on the auxiliary and the verb, may be given roughly as:

(70)	X	[+ PAST]	do	NOT	[+ VERB]	Y
	1	2	3	4	5	6 →
	1	∅	3+2	4	5+2	6

As written above, the rule can operate only when not is present in the sentence. This restriction is based on the fact that we have not found any instances of pleonastic tense marking among the affirmative counterparts. We do not have:

(71) a. *He did came yesterday.

b. *Did he came yesterday?

Because there is so little potential for occurrences of the above type in our corpus, it is difficult at this point to determine whether or not the absence of sentences like (71) is meaningful. At any rate, if these sentences were found (the second one seeming more likely than the first), it would be a relatively simple matter to adjust the tense-copying rule toward greater generality. Our suspicion is that the more general rule is probably the more correct form for some speakers.

Before concluding our discussion of pleonastic tense marking, it is important to note that "irregular verbs" constitute the majority of verb forms involved in this construction. In these verbs, past tense is formed by some internal change, e.g. sing, sang; come, came, as opposed to the simple addition of the -ed suffix, e.g. work, worked; pull, pulled. The distribution of pleonastic tense marking on the basis of verb form is shown in the following table:

Table 37. Frequency of pleonastic tense marking in irregular and regular verbs for Puerto Rican informants.

	Irregular Verbs	Regular Verbs
Realized pleonastic tense	17	3
Potential occurrences	38	19
% pleonastic	44.7	15.8

The above distribution indicates that irregular verbs favor pleonastic tense marking. Does this mean, then, that the rule that accounts for pleonastic tense marking should include a constraint based on whether the verb form is irregular or regular, i.e. must we specify this constraint in Rule (70) by $\begin{bmatrix}+\text{ VERB}\\ \text{A IRREGULAR}\end{bmatrix}$? Before assuming that this is what is needed, we may look for some possible phonological explanation for this difference.

The past tense of regular verbs is generally formed by the addition of some morphophonemic alternate of -ed. In the case of words ending in a consonant other than t or d, this results in clusters, as in verbs like [mest] messed, [kɔld] called, or [bəmpt] bumped. When we have a resultant cluster, such as st, ld, pt, etc., the cluster is eligible for the phonological process of consonant cluster reduction, so that the actual phonetic forms for messed, called, and bumped are [mɛs], [kɔl], and [bəmp] respectively. This process, which has been described in detail for Black English by Labov et al. (1968), Wolfram (1969), and Fasold (1972), is also found in PRE, presumably as a convergent feature that might be predicted from the influence of Puerto Rican Spanish and Black English. There is formal motivation for consonant cluster reduction irrespective of our observation about verb forms.[7] On the other hand, phonological processes such as cluster reduction do not affect strong verbs, since they are not formed by the addition of a suffix that can sometimes result in a consonant cluster.

We may therefore question whether the difference between the frequencies of pleonastic tense marking for irregular and regular verbs is a function of the cluster reduction rule (which operates on the grammatical marker of regular verbs but not of irregular ones), or whether it is a constraint that must be described as inherent in the tense-copying rule. The difference of 30 percent between the two frequencies would certainly be in range that could be accounted for by this phonological rule. We thus conclude that the tense-copying rule should be written without reference to the constraint [A IRREGULAR]. The difference in the frequencies will be accounted for when the lower level phonological rule operates on the output of this rule.

6.2 Negatives with indeterminates.[8] In discussing the use of negatives with indeterminates, it is necessary to start out by noting that there are some aspects of the rules needed for PRE that are shared with all standard and nonstandard dialects of English, some that are shared with other nonstandard varieties of English, and some that may be unique to PRE.

6.2.1 Rules for negative sentences with indeterminates. The "negative attraction" rule, first formulated by Klima (1964: 274), is applicable to PRE, as well as to standard and other nonstandard dialects of English.[9] This rule can be summarized roughly by saying that the negative is obligatorily attracted to the first indefinite if it precedes the verb. This accounts for sentences of the following type:

(72) a. Nobody does his work.

b. Nobody was hit by anybody anywhere.[10]

while not permitting sentences like:

(73) a. *Anybody doesn't do his work.

b. *Anybody was hit by nobody anywhere.

As Klima points out, the negative attraction rule operates not only with any of the morphophonemic alternates of not but also with adverbs that are "inherently" negative, such as scarcely and hardly.

(74) a. Hardly anybody came.

b. Scarcely anything happened.

There are two ways of specifying this type of attraction rule, depending on where the negative is originally placed in a sentence. One may choose to place the negative at the beginning of the sentence (see Fasold and Wolfram 1970:71 and McKay 1969) and specify the conditions under which the negative must obligatorily be attached to the indefinite, i.e. the first preverbal indefinite. On the other hand, one may choose, as Labov (1970:66) has done, to attach the negative obligatorily to the preverbal indefinite by moving the negative from its preverbal position (determined by a prior rule) to the indefinite. Labov (1970:67) specifies this as:

(75) Indef - X - Neg
1 2 3 →
1+3 2

When the indefinite occurs following the verb, the negative attraction rule may or may not apply. The negative may be realized as the negative particle with the auxiliary (or copula) as in:

(76) He didn't buy anything.

or it may be attracted to the postverbal indefinite, as in:

(77) He bought nothing.

The latter is an example of a rule option more associated with literary than with colloquial standard English usage. Both Labov et al. (1968:289) and Fasold and Wolfram (1970:73) have suggested that this rule is not a part of some nonstandard dialects, particularly Black English: that is, there is no rule of the type:

(78) Neg - X - Indef
1 2 3 →
2 1+3
where X does not contain Indef

Whether or not such a rule can be found to operate for Puerto Rican English or, for that matter, for Black English will be discussed in more detail later.

Whereas both of the above rules show how negatives operate with indefinites in standard English, another rule is needed to account for the well-known nonstandard English phenomenon of "double" or "multiple" negation, in which one underlying negative can be realized at two or more places in the surface structure. Thus we have:

(79) a. He didn't do nothing to nobody.
b. He didn't have no friends.
c. He don't never come no more.

These types of sentences are the result of a rule that copies the preverbal negative on any indefinite following the verb, and has been described simply as:

(80) Neg - X - Indef
1 2 3 →
1 2 1+3

What takes place is a copying of the negative (called negative concord by Labov et al. 1968) on as many postverbal indefinites as there are in a sentence. This rule can be extended to include all indefinites within the surface sentence limits,[12] as in:

(81) We ain't had no trouble about none of us
pullin' out no knife.

As has been stressed in other discussions of multiple negation, it must be remembered that this type of negation is the result of one underlying negative, and is to be distinguished from standard English sentences expressing propositions that contain more than one negative.[12]

Thus, a standard English sentence such as:

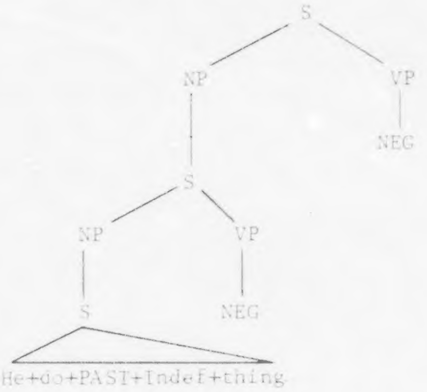
(82) He didn't do nothing; he was always busy at
one job or another.

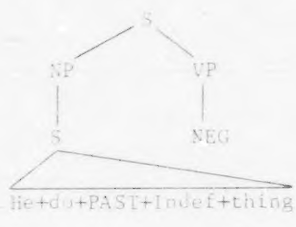
is the realization of two underlying negatives, while a nonstandard sentence such as:

(83) He didn't do nothing because he was so lazy.

is the realization of only one underlying negative.

The difference between He didn't do nothing in the two sentences can be seen in the following simplified P-markers:[13]





Although we do not doubt the ability of nonstandard speakers to use propositions containing more than one underlying negative,[13] when a nonstandard dialect reveals the categorical use of multiple negation with indefinites (see below), sentences like (82) may not be grammatical. Labov (1972b:816) maintains that this type of sentence is grammatical for nonstandard dialects: a Black English speaker, for example, would contrast the construction *He didn't do nothing* in sentences (82) and (83) by placing emphatic stress on *nothing*, as the standard English speaker is apt to do. However, in their comprehensive description of Black English, Labov et al. (1968) give no evidence that would support this contention.[14] Similarly, Wolfram's (1969) Detroit study and McKay's (1969:73) analysis of negation have not revealed any evidence that would support the contention that sentence (82) is grammatical in nonstandard dialects.[15] This raises the possibility, then, that multiple negation may be a constraint that blocks this semantically possible proposition from being grammatical.

It is interesting to note, in this regard, Rivero's (1970) discussion of surface constraints in Spanish that prohibit certain types of semantically logical negative propositions from being grammatical. For example, a sentence such as **No siempre no canta* 'He doesn't always not sing', while semantically logical, is ungrammatical because of a surface structure constraint that limits the number of *no* particles to the number of S-nodes in the surface structure. In the same sense, we suggest that multiple negation may be a constraint that prohibits negative indefinites from reflecting two underlying negatives within the same clause.

6.2.2 *The extent of multiple negation*. Although multiple negation is a well-known characteristic of most, if not all, nonstandard English varieties, the extent to which the negative concord rule applies may vary. Shuy, Wolfram, and Riley (1967 III:22) and Labov et al. (1968:267) reveal it to be quite variable for white working-class speakers. On the other hand, Labov et al. (1968:276) conclude that it is a categorical rule for Black-English-speaking preadolescents and teen-agers. Wolfram (1969:157) indicates that it is categorical for some of the preadolescent and teen-age blacks in Detroit.

In Figure 7, the distribution of the frequency of multiple negation is indicated for PRE informants. Only informants with five or more potential occurrences are included in the tabulation, since frequencies based on fewer examples are not useful. The tabulation includes negative sentences with a postverbal indefinite or with the adverb *ever* when occurring with a negativized auxiliary. Practically, this means that for the indefinite pronouns and determiners, all negative sentences in which *any* might be the standard English correspondent are counted.[17] But it excludes sentences in which *any* is not a potential surface structure alternative, as in:

(84) a. He's nothing like that.
b. He was nothing.

since there is no negativized auxiliary in the surface structure. These types of structures will be discussed in detail in Section 6.2.2.2.

For the adverb *ever/never*, it excludes sentences in which there is no surface structure realization of negation elsewhere, e.g. on the auxiliary or in an inherent negative such as *hardly*, eliminating sentences like:

(85) a. He never comes.
b. He'll never do it.

And, finally, following Labov et al. (1968:278), it excludes indefinites outside the clause, where the negative may be incorporated appositionally into *either*, *anyhow*, or *anything*,[18] in such sentences as:

(86) a. Your mother ain't good looking,
either. (23:10)

b. He don't get a second try, or
anything. (9:1)

As we will see, these structures meet special conditions for fluctuation that skew our view of how the negative concord rule applies.

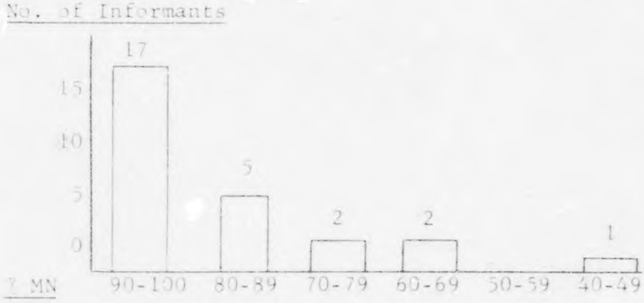


Figure 7. Frequency of multiple negation for
Puerto Rican informants.

The above figure plainly indicates that most of the speakers definitely tend toward the categorical or nearly categorical usage of multiple negation. Of the 17 speakers in the 90-100 percent range, 12 use multiple negation categorically. Of the 27 speakers tabulated, 22 have more than 79 percent multiple negation, and only one of the speakers falls below 50 percent.

It is instructive to compare the extent of multiple negation among our PRE informants with figures from one of Labov et al.'s (1968:276) black peer groups (the Jets, in single interview style for comparability); from the white nonstandard group Labov et al. (1968:276) studied (Inwood); from Shuy, Wolfram, and Riley's study of a white group in Detroit (1967 III:22); and from Wolfram's (1969:157) black lower-working-class informants from Detroit. This comparison is made in Table 38.

Table 38. Comparison of multiple negation in Detroit and New York City for Puerto Rican, black, and white informants.

	% MN	No. of Cat. MN Users/Total No. of Informants
Puerto Rican		
East Harlem (NYC)	87.4	12/27
Black		
Jets (NYC)	97.9	11/13
Detroit	77.8	4/12
East Harlem (NYC)	97.8	7/10
White		
Inwood (NYC)	81.0	2/8
Detroit	56.3	No data

In terms of both the relative frequency of multiple negation and the number of speakers who use multiple negation categorically, the PRE speakers fall between the white nonstandard groups and the black groups. The frequency of multiple negation for the Puerto Ricans is actually higher than for the black lower-class group in the Detroit study, but this group includes adults and both males and females. In terms of the most comparable group, the black informants in this study, multiple negation for the Puerto Ricans does not reveal the same extent of application.

In discussing multiple negation, we have considered our Puerto Rican informants only as a group. We can, however, hypothesize that Puerto Ricans with extensive black contacts will use multiple negation more frequently than will those with restricted black contacts, because of its categorical usage in Black English. The breakdown according to these groups is indicated in Table 39. In addition to the relative frequency of multiple negation, the number of informants who use it categorically is given for each of the groups. Only informants who have at least five potential examples of multiple negatives are included in our consideration of categoricality.

Table 39. Comparison of multiple negation for BL, PR/BL, and PR informants.

	No. MN/Total	% MN	No. of Cat. MN Users/Total No. of Informants
BL	131/134	97.8	7/10
PR/BL	63/65	96.9	5/6
PR	213/256	83.2	7/21

Table 39 confirms our hypothesis concerning Puerto Ricans with extensive black contacts. Five of the six informants in this classification reveal multiple negation categorically, and there is no significant difference between the frequencies of multiple negation for this group and for the black group. On the other hand, only 7 of the 21 Puerto Ricans with limited black contacts use multiple negation categorically. Furthermore, the relative frequency for this group tends to match the frequency with which multiple negation is found in Labov et al.'s (1968) nonstandard white group. We conclude, then, that Puerto Ricans with extensive black contacts will use multiple negation to approximately the same extent as it is used in Black English, i.e. categorically, while Puerto Ricans with restricted black contacts will realize multiple negation to approximately the same extent as it is realized in white nonstandard dialects in New York City.

6.2.2.1 Sentence-modifying indefinites. At this point, let us return to the categories that we have eliminated from our tabulation of multiple negation because they meet special conditions for variability. Previous studies by Labov et al. (1968:177) and Wolfram (1969:157) for Black English indicate that indefinites that are appositional to the negativized clause, as in (86) above, show less multiple negation than do indefinites within the negativized clause. When this distinction is made, we find the following distribution:

Table 40. Frequency of multiple negation in main clause and modifying clause for Puerto Rican informants.

	No. MN/Total	% MN
Main clause	266/298	89.3
Modifying clause	14/23	60.9

The difference in frequencies confirms the constraint on multiple negation affected by the structural distinction of "clause integral" versus "clause modifying" for PRE as a nonstandard English variety. For categorical users of multiple negation, this is a variable subcategory of the negative concord rule, as Labov et al. (1968:278) have suggested for Black English; for variable users of multiple negation, this is a constraint on variability.

6.2.2.2 Multiple negation with copula. The second type of structure that we have eliminated from our tabulation is sentences in which the negative element is attached to a postverbal indefinite but not to the auxiliary. We suggested earlier that there may be no rule in some nonstandard dialects (particularly Black English) that allows for sentences like:

(87) a. *He bought nothing.

b. *He picked up nothing from school.

For our PRE informants, there are only three such occurrences (less than 2 percent) with the main verb, and two of these are by the one speaker who has less than 50 percent multiple negation.

Does this mean, then, that there is no rule like Rule (88), in which the negative can optionally be transported to a post-verbal indefinite from its position on an auxiliary or a copula, i.e. the tense carrier?

Before concluding that there is no optionality of this type for the PRE speaker, we must look at what happens to the negative in certain types of constructions. First, we must note what happens with indefinites in negative sentences with a copula that could potentially be multiply negativized. We observe:

(88) a. There's no Italians. (32:10)
b. They're no good. (19:2)

This type of occurrence fluctuates with multiple negatives like:

(89) a. There ain't no leader. (31:7)
b. You ain't nothing. (28:10)

This sort of fluctuation is quite frequent, as can be seen in the following table. Because the absence of multiple negation is observed so frequently with existential there (or, for some speakers, it), the table is broken down on the basis of existential there, e.g. There's no Italians or It's no Italians, versus other subjects, e.g. They're no good.

Table 41. Frequency of multiple negatives with copula and indefinite for Puerto Rican informants.

	No. MN/Total	% MN
Existential there/it	19/36	52.8
Other subjects	7/12	58.3
Total	26/48	54.2

The sort of variation indicated in (88) and (89) is obviously inherent within PRE, as it is within other nonstandard dialects of English. Speakers who show categorical multiple negation elsewhere consistently reveal fluctuation in sentences like (88) and (89). In this respect, this fluctuation may differ from sentences like (87), which might be considered importations from standard English because of their very limited occurrence.

Several options may be suggested in an attempt to account for this variation. As a first alternative, we may suggest that Rule (80) is peculiar to verb phrases containing a copula. But if we choose this option, it would mean that a sentence like (90) would be grammatical:

(90) *It's like that no more.

Our inclination, however, is to suggest that if (87) is ungrammatical for nonstandard speakers, then (90) is also ungrammatical. The limited evidence that we have in our corpus would seem to confirm this, for we get sentences like (91), but not like (90).

(91) It ain't like that no more. (5:7)

Another possible alternative may be related to copula contraction. We may hypothesize that if copula contraction (or, for some speakers, deletion) has taken place preceding an indefinite, then multiple negation may become variable: that is, a speaker may inherently alternate between sentences like (92) and (93):

(92) a. He's not no good at all.
b. He's not nothing.
(93) a. He's no good at all.
b. He's nothing.

If this were the case, then the phonological process of contraction (or deletion) would be a surface constraint that allows multiple negation to be variable for speakers who may use it categorically in other types of environments. The contraction of the copula may inhibit the categorical operation of multiple negation because it eliminates the possibility of the negative particle's attaching itself to the copula, e.g. *It'sn't here;

instead, the particle must stand alone, e.g. It's not here. This phonological process may then allow the negative particle to optionally be deleted. It is really copula contraction as it affects negative contraction that results in the variability.

If this is the correct analysis, we would expect that in the past tense, where copula does not normally contract (and is therefor eligible for negative contraction), multiple negation would be categorical for speakers who use it variably in nonpast forms. Thus, (94) would be ungrammatical, but (95) grammatical.

(94) *There was nothing we could do.

(95) There wasn't nothing we could do.

There are only six past tense occurrences of copula with negative indefinites in our corpus, and three of them are multiply negated, so that the evidence at this point does not confirm this solution. If this were confirmed by further evidence, it would be an attractive alternative, however, since we would expect the same principle to hold for contractable modals occurring with the postauxiliary adverb never, making both (96) and (97) grammatical for categorical users of multiple negation.

(96) He'll never make it.

(97) He won't never make it.

McKay (1969) indicates that only 97 is grammatical for Black English, but says nothing about present tense copula, so it is difficult to determine if she admits the fluctuation we have observed for both Puerto Rican and Black English in the much more frequently occurring nonpast copula forms. A third alternative may be related to what we can call the "contiguity condition". Through the application of the negative concord rule and the placement of the negative on the copula, it is observed that two negatives are immediately contiguous. When this is the case, we may suggest that there is an optional rule that may delete the first negative, specified roughly as:

(98)	X	Cop	NEG	NEG + Indef	Y	
	1	2	3	4	5	→
	1	2	∅	4	5	

If the fluctuation is specified through an optional rule such as (98), it accounts for the ungrammaticality of (90) for some speakers, while allowing fluctuation between (88) and (89) and between (92) and (93), which our data indicate to be variable. Of course, this rule operates on the output of the negative concord rule and the rule that places the negative to the right of the copula. Although at first glance, this may not appear to be the most attractive alternative, when we investigate multiple negatives with the preverb never/ever, we find that the contiguity condition may have greater applicability than just to the copula.

6.2.2.3 Multiple negation with hardly and never.

In addition to the fluctuation we observe with copulas, we note that there is considerable fluctuation of multiple negatives with the negative adverbs hardly and never. Most characteristically there is variation between do+NEG+[NEG] adverb and just [+NEG] adverb. For example, we get:

(99) a. We don't never go in front of them. (21:4)
b. I don't hardly go with them. (22:10)
(100) a. I never go with them no more.
b. We hardly play with that. (35:1)

The following frequency distribution is observed for two negative adverbs:

Table 42. Frequency of do+NEG with negative preverbs for Puerto Rican informants.

	do+NEG+NEG Prev./Total	% MN
hardly	10/19	52.6
never	13/52	25.0

This sort of variation, like that noted above, is an integral part of PRE, as it is of other nonstandard dialects of English. How, then, do we account for such variation?

To begin with, we must note that when the adverb occurs in the postauxiliary position, multiple negation may not take place. Thus sentences like (101) are grammatical but those like (102) would not be:[19]

(101) a. He never did come.

b. He never would come.

(102) a. *He never didn't come.

b. *He never won't come.[20]

Thus, one alternative for specifying this restriction may be related to movement of the adverb to a postauxiliary position. If a permutation such as (103) takes place, the negative may be attached to the auxiliary:[21]

(103)

$$\begin{array}{cccccc} X & \text{Adv} & \underbrace{\text{TENSE}\begin{Bmatrix}\text{have}\\ \text{M}\\ \text{be}\end{Bmatrix}} & [+\text{VERB}] & Y & \\ 1 & 2 & 3 & 4 & 5 & \rightarrow \\ 1 & 3 & 2 & 4 & 5 & \end{array}$$

Does multiple negation obligatorily take place when Rule (103) has been applied? If this were the case, then there would be no variation between (104) and (105).

(104) a. Words won't never harm me. (22:10)

b. You couldn't hardly compare. (32:8)

(105) a. He thought he would never make it. (10:4)

b. I could hardly breathe, pain me so hard, boy. (20:7)

For speakers who use multiple negation categorically in other than the variable context described here, four out of eight examples are realized as multiple negatives. Although this is only a limited number of examples as the basis for our conclusion, the evidence we do have does not confirm the categorical operation of multiple negation for adverbs that have been moved to a postauxiliary position. And when modals that contract with the preceding noun phrase are considered, it is quite clear (for both Puerto Rican and Black English) that multiple negation does not appear categorically, for there is clear evidence that sentences like (106) are grammatical in both Puerto Rican and Black English:[22]

(106) a. He'll never do it.

b. He'd never if he could.

Contractability with the preceding noun phrase definitely tends to impede multiple negation, and may have to be built into the description as a constraint on multiple negation. But as we suggested in our discussion of copula and postverbal indefinites in negative sentences, it does not appear to be the sole reason for specifying the optionality of multiple negation for speakers who otherwise have categorical application of the negative concord rule. When the type of optionality that we have here is compared with that discussed for copula sentences with postverbal indefinites, we again note that the negatives here meet the contiguity condition that we discussed for copula. The presence of adverbs to which the negative has been attached or in which the negative is inherent and the placement of the negative on the auxiliary result in immediately contiguous negatives. Thus, we can suggest that the contiguity condition has more general application than was specified in Rule (98). Excluding irrelevant details, this can be given as:

$$(107)\quad \begin{array}{ccccc} \text{X} & \underbrace{\text{Tense}\begin{Bmatrix}\text{have}\\ \text{M}\\ \text{be}\end{Bmatrix}} & \text{NEG} & \underbrace{[+\text{NEG}]\ [+\text{Indeterminate}]} & \text{Y} \rightarrow \\ 1 & 2 & 3 & 4 & 5 \\ 1 & 2 & \emptyset & 4 & 5 \end{array}$$

This rule must, of course, operate on the output of the negative concord rule. Since this rule operates after the negative concord rule has applied and cannot remove the negative that has been attached to or is inherent in the indeterminate, it rightly disallows sentences like (108) for speakers who use multiple negation categorically in other contexts:

(108) a. *You don't ever do it.
b. *He wouldn't ever do it.

Furthermore, the rule must be ordered so as to apply only after the adverb has been moved to a postauxiliary position, since the negatives cannot be contiguous otherwise. The contiguity condition accounts for the grammaticality of sentences like (88) and (100), while prohibiting sentences like (87).

The grammars of speakers who have multiple negation, but for whom (87) may be grammatical, might be characterized by inserting X between the two negatives: if X is null, we may expect the frequency of negative deletion to be increased. One will note that such a formulation for nonstandard speakers differs from its formulation for standard English speakers, i.e. a "negative transportation" rule. But since we need the negative concord rule and the rule for the contiguity condition anyhow, it is more economical to expand the latter rule than to introduce a negative transportation rule like (78).

6.2.3 Preverbal indefinites. Although the frequency of multiple negation for some Puerto Rican English speakers may more closely match its frequency in Black English than in other nonstandard dialects, there are other aspects of multiple negation in Puerto Rican English that differ from those of Black English. One characteristic of Black English is multiple negation involving an auxiliary and a preverbal indefinite. Thus, we may get:

(109) a. Nobody didn't do it.
b. Nobody couldn't come.

which are equivalent to standard English:

(110) a. Nobody did it.
b. Nobody could come.

This type of multiple negation is found in studies of Black English as reported by Labov et al. (1968), Wolfram (1969), and McKay (1969). Its occurrence in Black English is quite variable, the frequency among pre-adolescents being in the 25 to 50 percent range. It is also reported that this sort of multiple negation is found in one variety of white nonstandard speech (Labov et al. 1968:273), but it is apparently not found in the speech of the white nonstandard groups that Labov et al. (1968:277) studied in New York and is not characteristic of most northern white nonstandard speech.[23]

In the entire corpus, there are only two occurrences of multiple negation involving a preverbal indefinite and a negativized auxiliary (representing less than 7 percent of the total occurrences), and both of these are used by the same speaker:

(111) a. Nothing couldn't hurt him, nothing. (19:14)
b. Nothing couldn't hurt him. (19:16)

Surprisingly, this speaker does not have extensive contacts with blacks, judging on the basis of both our objective data and our subjective impressions. His speech on the whole tends to show more Spanish traits than most of the other Puerto Ricans in the corpus, but this particular construction does not appear to be attributable to Spanish influence, since sentences like:

(112) a. *Nadie no lo hace. 'Nobody doesn't do it'.
b. *Nadie no puede venir. 'Nobody can't come'.

are generally also ungrammatical in Spanish. Whatever the explanation may be for the uses by this one speaker (see

Kiparsky 1968:192 ff. for a possible explanation in terms of rule simplification related to acquisition), it is clear that this type of structure cannot be described as an integral part of multiple negation in PRE for most speakers.

Related to the negation of a preverbal indefinite and a negativized auxiliary is what Labov et al. (1968:283) have called "negative inversion", in which the auxiliary and the negativized indefinite are reversed in declarative sentences, producing:

(113) a. Didn't nobody do it.
b. Couldn't nobody come.

This feature, quite typical of Black English and of some southern white varieties, is totally absent in our corpus. Although more potential examples than the 37 that we have might produce the occasional use of such a structure among some of our informants with extensive black contacts, it is clear that it is not a feature that has become an integral part of PRE.

In part, the conclusion that there are no instances of negative inversion in our corpus is due to the interpretation of copula with indefinites as the result of a process other than negative inversion for PRE speakers. We do have some examples of ain't or isn't preceding the indefinite, as in:

(114) a. Ain't no leaders, ain't nobodies gonna take after us. (31:7)
b. Isn't none of 'em where I live (26:3)
c. When you die, you die, ain't no way to come back. (18:10)

Labov et al. (1968:285 ff.) suggest that for Black English, there are two alternative analyses for (114): one can interpret it either as a matter of deletion of existential there or it, or as a case of negative inversion, as in sentences like (113). Labov et al.'s choice of the latter option is largely due to the fact that other structures are not limited to copula, but occur with modals and *do* auxiliary (Labov et al. (1968:285-86). Without this evidence, there is weak motivation for considering it a matter of negative inversion. Furthermore, speakers who have this structure show its variation with *it* or *there*. For example, quite close to sentence (114a), Informant 31 produced:

(115) There ain't no leader. (31:7)

Similarly, Informant 18 produced the following sentence:

(116) He kept saying, ain't no gold, ain't no gold, everytime he said there ain't no gold, the guy used to smack him. (18:4)

We thus conclude that there is a simple rule, like (117), that operates to delete *it/there* after prior rules have combined clauses and inserted a dummy subject.[24]

(117)

$$\begin{array}{lcccl} \text{It/There} & \underbrace{\text{Cop NEG}} & \text{Indef} & X & \\ 1 & 2 & 3 & 4 & \rightarrow \\ \emptyset & 2 & 3 & 4 & \end{array}$$

Finally, it has been observed that Black English may transfer a negativized preverbal auxiliary across clauses, so that sentences like:

(118) a. It wasn't no girls couldn't go with us.

b. It ain't no cat can't get in no coop.

are equivalent to standard English:

(119) a. There weren't any girls who could go with us.

b. There are no cats that can get in any coop.

As might be expected from our previous observations about auxiliaries and preverbal indefinites in negative sentences, this form is not found among our PRE speakers.

6.3 *A special use of hardly in PRE*. Although most instances of *hardly* and *never* follow the patterns observed in other nonstandard dialects, both white and black, there are several instances of hardly in PRE that depart rather radically from these patterns. Observe the following examples:

(120) a. Hardly everything's Puerto Rican.... (22:10)

b. Hardly everyone was in prison.... (20:4)

c. I only came in when it was hardly ending. (31:4)

d. ...and his leg hardly broke. (22:7)

In attempting to account for these examples, we must first look at more context, particularly for the first two examples. Just on the basis of the above sentences we do not know whether hardly everything means that the majority or that only a few of the speaker's acquaintances are Puerto Rican. If the latter is the case, it might mean that the negative attraction rule with preverbal indefinites might have to be modified in order to accommodate this construction. But more context plainly indicates that the former meaning is intended:

(121) FW: Are there mostly Puerto Ricans where you live?

IN: Yep. Hardly everything's Puerto Rican, only a couple Italian people, that's all. (22:10)

When wider context is examined for the second example, we find that 'many' rather than 'few' is the intended meaning:

(122) Hardly everybody was in prison and Coop ran almost freed us; everybody was caught. (20:4)

In attempting to account for the uses of hardly we have encountered above, it is informative to look at several Spanish sentences:

(123) a. Casi ninguno vino. 'Hardly anyone came'.

b. Casi nada está terminado. 'Hardly anything is finished'.

c. Casi todo el mundo vino. 'Almost everyone came'.

d. Casi todo está terminado. 'Almost everything is finished'.

It is important to observe that casi can occur in both affirmative and negative sentences in Spanish; in negative sentences it is translated as hardly and in affirmative sentences as almost. Casi is inherently neither affirmative nor negative in Spanish. What we may predict from this pattern is a use of hardly that might be semantically analogous to its use in Spanish. This means that the inherent negativity of hardly may not necessarily characterize some speakers' use of it. If [+NEG] is removed from the lexical characterization of hardly, it functions much like the adverb almost, which is inherently unmarked either affirmatively or negatively. By the simple removal of [+NEG] in the lexical representation of one variety of PRE (spoken by a minority of informants) we can account for what appear to be some rather radical departures from other nonstandard English varieties.

6.4 Summary. In our preceding discussion of negation in PRE, we have seen that there is a great deal of overlap between the treatment of negation in PRE and its treatment in other nonstandard dialects. Multiple negation is a phenomenon that is widespread in PRE, as it is in other nonstandard dialects, and for some speakers (particularly those with extensive black contacts), negative concord is a categorical rule. The categoricality of this rule, of course, is specific to certain types of environments, excluding sentence-modifying negatives and certain negative constructions meeting what we have called the contiguity condition. Negative particles also tend to parallel their usage in other nonstandard dialects, particularly the uses of ain't.

Although there may be influence from Black English with respect to the extent of multiple negation, some features of negation unique in a northern setting to Black English do not seem to be assimilated to the extent that we have seen for phonological features of Black English. This suggests a difference between the assimilation processes of grammatical and phonological features, a matter which we shall take up in more detail in the next chapter.

Finally, we have seen that there are several aspects of negation in PRE that may be unique to this dialect. In part, this is due to aspects of vestigial interference in grammar that parallel similar phenomena in phonology. But we have also seen, at least in one case (viz. pleonastic tense marking), that some independent development may have taken place in PRE.

NOTES

1. For such studies, one can refer to Klima's (1964) comprehensive study of standard English negation and to the report of Stockwell, Schachter, and Partee (1968), which includes negation as one of the major areas covered in the UCLA syntax project.

2. For those speakers who have the copula deletion rule, we can also get Ø for these contracted forms, so that we have We not gonna do it.

3. One might argue that the difference between am and are/is is simply a function of the fact that there are fewer potential occurrences of ain't in the context of multiple negation. Two facts militate against this, however. In the first place, the discrepancy still obtains for non-multiple negation contexts, where there is a more representative number of potential occurrences. Secondly, the frequencies in the multiple negation context are in the direction we would predict, despite the fact that there are only seven potential occurrences. Other studies (Labov et al. 1968, Fasold 1972) have revealed that constraints on frequency can be established from a surprisingly small number of occurrences.

4. For those Puerto Rican English speakers who use ain't for didn't, an ambiguity arises that is not encountered by Black English speakers who use ain't for didn't, namely,

whether ain't in a sentence such as He ain't called a cab is equivalent to 'He hasn't called a cab' or 'He didn't call a cab'. Only the former interpretation is possible for Black English speakers.

5. It is essential here to note that the term hypercorrection has been used by sociolinguists in two senses, which we refer to here as "structural hypercorrection" and "frequency hypercorrection". Structural hypercorrection has been used to refer to the extension of the use of forms, based on an unfamiliarity with the structural restrictions that cover their usage. Thus, when Black English speakers use -Z on nonthird person forms because of their unfamiliarity with the standard English rule governing -Z third person singular usage, we have an instance of structural hypercorrection. In the case of frequency hypercorrection, the structural placement may be correct, but the relative frequency exceeds the expected norms due to stylistic constraints on formality. This is the type of hypercorrection Labov (1966) referred to when he described the higher frequency of r usage by lower-middle-class speakers in New York City when compared with middle-class speakers in the more formal styles of speech.

6. The reason that this total does not match the total potential occurrences given previously, i.e. 56, is that some verb forms involve both the addition of a suffix and an internal change, e.g. leave, left, causing them to be classified in both categories the way we have tabulated them here.

7. For a description of this phenomenon in PRE, see Wolfram (1971:356-60).

8. Indeterminate is used here to cover indefinite determiners, nouns, and certain adverbs such as never.

9. A more technically accurate account of the rules for negative sentences with indeterminates has recently appeared in Labov (1972b). The summary here is intended to be only approximative.

10. This rule must, of course, apply after the passive transformation has taken place.

11. Although there is no actual grammatical limit to the instances of multiple negation within a surface sentence, in my study of Black English in Detroit (Wolfram 1969) and

in this corpus, I have found no instances of more than four surface negatives for one underlying negative. McKay (1969) also finds a stylistic limitation to four negatives in her corpus. For qualifications to this statement, see Labov (1972b).

12. For a recent discussion of standard English sentences that contain more than one negative in their underlying structure, see Baker (1970).

13. One can introduce the negative presententially or in the verb phrase, and various arguments have been advanced for choosing each alternative. I have chosen the latter here, but will not go into detail about this since it is not essential to our discussion.

14. For example, a sentence such as I couldn't not go; I hadda go, recently heard from a Black English speaker at a basketball game, reveals two underlying negatives.

15. In Labov's (1972b:816) more recent report of negation, he does include an example to demonstrate the grammaticality of two or more underlying negatives with indefinites.

16. McKay goes somewhat further in her generalization, stating that "there is no evidence that the meaning of a sentence can be changed by negating more than one constituent, nor is there any expectation of finding such evidence" (McKay 1969:73). This observation, however, does not seem supportable in light of data of the sort mentioned in Note 14 above. The observation appears to be restricted to the negation of indefinites.

17. In the tabulation of multiple negation reported in Wolfram (1969:159-61), the generic use of the article a in negative sentences is counted as a potential multiple negative. Although the distinction between specific and generic articles may be technically correct, there are too many ambiguous examples to make this dichotomy meaningful for a tabulation of this sort. We have therefore counted no examples of determiner a as instances of potential multiple negation.

18. Labov et al. (1968:278) include anymore in this list but give no examples, so it is unclear how they define its sentence-modifying use. If their definition refers to sentence-final uses such as He doesn't come to our house anymore, our data here reveal that 31 out of 37 cases of

sentence-final any/nomore are realized by multiple negation. This frequency (84 percent multiple negation) is much more like the indefinites discussed below.

19. Sentences in which the auxiliary is realized in the surface structure following the adverb appear to have an emphatic meaning. McKay attributes this to the addition of EMPHATIC to the auxiliary. If the EMPHATIC has been added to the auxiliary, then Rule (103) is blocked (see McKay 1969:80).

20. We are, of course, referring to the sentences on (102) as the realizations of one underlying negative. Sentences such as 102 can be grammatical if they are the realizations of more than one underlying negative.

21. For more details concerning the conditions for such a rule, see McKay (1969:79 ff.).

22. The contracted modal 'd or 'll can, of course, be deleted by a low-level phonological rule.

23. The only instances of this type of multiple negation found among the white community in Detroit (Shuy, Wolfram, and Riley 1967) come from Appalachian in-migrants.

24. Both it and there are listed here as dummy subjects since the informants fluctuate between their usage, as in It ain't no games around here (31:1) and There ain't no leader (31:7).

7 SOCIOLINGUISTIC PRINCIPLES

From the descriptive analysis of the preceding chapters, a number of apparent sociolinguistic principles have emerged. Some of these relate specifically to the study of language contact and assimilation, while others relate to more general sociolinguistic considerations. In reality, of course, these two aspects are inseparable as the study of speech in the context of the community provides a base for evaluating current issues in sociolinguistics. In this chapter, we will consider some of these issues and look at their implications for the study of language in its social context. For the most part, we will depend on the descriptive data discussed in the previous chapters as our empirical base, but in some cases we will introduce supportive data from our more complete description of Puerto Rican English in East Harlem (Wolfram 1971). Although the specific point of reference is the Puerto Rican community in East Harlem, the sociolinguistic issues we discuss here are more broadly based in their application. It is this more general framework that is the focus of this chapter.

7.1 Vestigial interference. At various points in our discussion of the features of PRE, we have referred to the concept of vestigial interference. We use the term to refer to the infrequent occurrence of straightforward interference variants from Puerto Rican Spanish. It has been demonstrated that when there are two different variants that may correspond to a standard English form, one from Spanish-influenced English and one from Black English, the occurrence of the interference variant is usually quite rare.

In phonology, we have seen that the interference variant [s] for standard English morpheme-final _θ_ is limited to occasional realizations by a minority of informants. In grammar, the use of _no_ for negativized auxiliary constructions, e.g. _don't_, _didn't_, is classified as a matter of vestigial interference. These two examples are only tokens of a number of other cases that might be classified as vestigial interference. For example, first generation Spanish immigrants learning English will often have difficulty producing and discriminating between vowel sounds such as _æ_ and _ɛ_. Given the word pair _bet_ and _bat_ and asked to produce them and determine if there is any difference in their pronunciations, only 1 of our 29 Puerto Rican informants pronounced them identically (although he did perceive a difference between them). Only 2 of the informants were unable to perceive any difference between the two words (although they did pronounce them differently). It is quite clear that the second generation informants, despite the fact that their first language is Puerto Rican Spanish, reveal neither the types nor the extent of interference variants that their first generation parents do.

In our characterization of vestigial interference, two basic criteria have been used. First, we have applied the criterion of limited usage with reference to the "proportion of informants" who realize a particular interference variant. For example, in the preceding paragraph, we have referred to the fact that only 3 of the 29 informants gave responses to the _ɛ/æ_ contrast that might be influenced from the phonological system of Puerto Rican Spanish. But we have also used the criterion of frequency in terms of the "proportion of occurrences" of an interference form. This frequency level is based on our calculations of actual occurrences of a form in relation to its potential occurrences. Theoretically, of course, the two criteria need not go hand in hand. The theoretically possible combinations of informant and occurrence proportions can be illustrated as:

Informant Proportion	Occurrence Proportion
Majority	Significant
Majority	Nonsignificant
Minority	Significant
Minority	Nonsignificant

It is the last category, minority informant proportion and nonsignificant occurrence proportion, that usually characterizes vestigial interference, although we have several instances of minority informant proportion but significant occurrence proportion. For straightforward interference, we do not typically have examples of majority informant proportion and either significant or nonsignificant occurrence proportion.

In our definition of vestigial interference on the basis quantitative measurement, it should be noted that we have used an arbitrary cutoff point. For example, if a particular interference item is actualized in less than 5 percent of all the cases in which it could legitimately be realized, then we consider it to be a matter of vestigial interference. And if less than one-fourth of all informants realize a particular interference variant, then we classify it as vestigial interference. Despite the arbitrary nature of our cutoff point, we have maintained that it may have important implications for our formal representation of PRE. When there is a minority of informants who evidence a significant proportion of interference forms, it seems quite evident that we have to formally represent these forms in terms of a variety of PRE. But in the case of nonsignificant occurrence proportion for a minority of informants, we have questioned whether we need to describe the form as an integral part of PRE.

At this point, we would caution that the notion of quantitative significance, as we have used it in the preceding paragraphs, should not be confused with social significance. It may well be the case that very infrequent occurrences of a particular form are sufficient to socially mark an individual. In fact, there seems to be some indication that vestigial interference phenomena may be sufficient for identifying the Spanish background of our Puerto Rican informants to outside listeners.

In terms of language change, vestigial interference is apparently the last stage in the process of linguistic assimilation. The next stage is the categorical absence of the interference variant, fully completing the process of assimilation. When we look at the process of change from our viewpoint of language variability, we may hypothesize that linguistic assimilation in second language acquisition recapitulates the processes found in other types of language change. For example, if we adopt a model of language change that includes variability in an integral way (Bailey 1973b), we may hypothesize that there are several different stages through which the change will go. The beginning point is the categorical usage of an interference variant and the end point is the categorical adoption of the corresponding variant in the second language. In between these two points there is variability in the use of the interference and correspondence variants. The variable stages, we may hypothesize, will show some of the same environmental constraints that have been isolated in studies of "inherently variable" speech behavior.

The first stage, as we have mentioned above, is the categorical occurrence of the interference variant. In the next stage, we may have categorical interference in some environments but variable behavior in others. For example, standard

English *θ* and the *s* interference variant for standard English *θ* may be variable in word-initial position, e.g. *sink* ~ *think*, while *s* may be categorical in word-final position[1].

In the next stage, we have variability in a number of (if not all) environments. If we follow the reasoning of Bailey (1973b) and Bickerton (1971), we may expect that higher frequencies will occur in those environments in which variability first occurred. Thus, if *θ* and *s* fluctuate in both word-initial and -final positions, we may expect that *θ* will be more frequent in word-initial than in word-final position, since variation first took place in word-initial position.

Following a stage of "maximum variability", some environments will categorically adopt the new variant, while other environments will continue to indicate variability. Again, those environments in which variability is first initiated will lead the way and become the first to categorically adopt the new variant. In our example, we would expect this to be *θ* in word-initial position.

Finally, there is categorical adoption of the new variant in all environments as the process of assimilation is completed. Before the process is completed, however, we may expect occasional lapses. If our hypothesis of how the change takes place is correct, we would expect these lapses to be environmentally restricted. This is, in fact, what we observe when we look at the behavior of *θ* and *s*. It is only in word-final position that we observe this vestigial interference. It is this observation, in fact, that leads us to reconstruct the various stages of *θ* acquisition the way we do.

In this section, we have talked about vestigial interference only as it relates to one particular language style. Presumably, we would expect that there may be considerable variation in the extent of interference. For example, we may find that interference levels shift, depending on the formality of the style; the more informal the style, the higher the incidence of interference. Or we may find that the level of interference on the part of another interlocutor may effect interference. If we were to extend our investigation of interference over a complete range of topics, styles, and interlocutors, we may find that our classification of vestigial interference is stylistically confined: that is, it may be that vestigial interference is found in one style but that other styles may show a significant level of interference. If empirical data indicate that this, in fact, is the case, it would be apparent that our grammar of these speakers would have to be revised to formally incorporate some of the features that we have questioned on the basis of our current data revealing vestigial interference.

7.2 Convergent processes. Our discussion of vestigial interference in the above section refers only to variants found in Spanish-influenced English that have no parallel processes in the surrounding Black-English-speaking community. But there are also variants in Spanish-influenced English that may parallel the variants that would be predicted from the surrounding black community (but not standard English), as we have illustrated in our discussion of syllable-final //d//.

There are actually two kinds of Puerto Rican Spanish influence that may result in parallel processes between Black English and Puerto Rican English. In the first type, there is a correspondence in the morpheme structure sequence rules, but Spanish and Black English both have identical processes operating on underlying forms. This is the case for //d// deletion, which we have discussed in Chapter Five. Both Black English and Puerto Rican Spanish have words ending in //d// as part of their morpheme structure sequence rules, but there is a deletion rule operating in both language varieties.

The second type of convergence involves differences in morpheme structure sequences. A different morpheme structure sequence for Puerto Rican Spanish may result in interference that parallels the output of a Black English rule. For example, the absence of word-final consonant clusters in Spanish results in the absence of final members of consonant clusters in the English of many Puerto Ricans -- the result of interference. Words like *test*, *ground*, and *wild* may be produced as *tes'*, *groun'*, and *wil'* respectively. In Black English, there is clear evidence for underlying word-final clusters (see Wolfram 1970), but there is a phonological operation that deletes the final member of the cluster. This results in an output for Black English speakers analogous to that caused by interference in Spanish-influenced English, though for different reasons.

In our original consideration of convergent processes in Chapter Five, we discussed only the first type. For a convergent process of this sort, we observe that PRE speakers as a group reveal a greater incidence of the *Ø* variant for //d// than is found in Black English. With straightforward assimilation variants, as we will see in Section 7.3, the group shows a reduced frequency when compared with the surrounding Black-English-speaking community. Although the Puerto Rican group as a whole may show a greater frequency of a convergent variant than does the Black-English-speaking group, it is observed that Puerto Ricans with extensive black contacts show a greater frequency of convergent processes than do Puerto Ricans with restricted black contacts. We have hypothesized previously that the higher figures for the PR/BL group may be due to the fact that these speakers are reinforcing the process of //d// deletion, that may have assimilated on the basis of their close contacts with blacks, with the more general convergence of these processes predictable from Spanish influence.

The frequency distributions for the convergent processes described in the preceding paragraph appear to be much more typical when similar surface realizations result from identical processes operating on similar types of morpheme structure sequence than when similar realizations result from different morpheme structure sequence rules. This can be illustrated by looking at examples of the two types of processes. In Table 43, the ∅ for syllable-final underlying d represents the first type, and the reduction of word-final consonant clusters represents the second type. For d, we can simply adapt one of our previous tabulations, and for the consonant cluster reduction, we can adapt Shiels' (1972:217) tabulations. Only two main environments are looked at for both tabulations.

Table 43. Comparison of two types of convergent processes in vocalic and nonvocalic environments for BL, PR/BL, and PR informants.

	∅ for d		Word-Final Cluster Reduction	
	___##V	___##-V	___##V	___##-V
BL				
No./Total	16/131	114/295	120/222	296/329
% del.	12.3	38.6	54.1	90.0
PR/BL				
No./Total	20/78	113/170	65/133	160/181
% del.	25.6	66.5	48.9	88.4
PR				
No./Total	50/262	314/567	253/561	631/739
% del.	19.1	55.4	45.1	85.4

Although the actual environmental effects on variability are much more detailed than those given above, Table 43 is sufficient to demonstrate the difference we are talking about.

For the realization of /d/ as ∅, Puerto Ricans with both extensive and restricted black contacts exceed the frequency levels of the black group. But in the case of consonant cluster reduction, neither group of Puerto Rican informants exceeds the frequency levels of the black group. We should mention, however, that there is no significant difference between the frequency levels of the black group and the Puerto Rican group with extensive black contacts for consonant cluster reduction. If these two phonological features are truly indicative of the two basic types of processes resulting in convergence, then it is essential to distinguish between them in order to account for the observed differences in the frequency distribution. It is apparent that surface realizations resulting from similar underlying forms and derivations are more supportive of convergence than are similar surface realizations arrived at through different processes. Convergent processes of the second type show frequency levels more aligned with assimilation variants than with those involving the first type of convergence. We may hypothesize that differences involving morpheme structure sequence rules are more obtrusive cases of interference and, therefore, would tend to be avoided by a group of speakers desiring to restrict their interference.

Before concluding our discussion of convergent processes, it should be noted that the various groups of speakers indicate parallelism in the types of environmental constraints on variability. The types of linguistic environments and the ordering of constraints appear to be identical for the Black-English-speaking group, the Puerto Ricans with restricted black contacts.

In attempting to account for this similarity, several alternative explanations can be offered. First, we may suggest that the parallelism is observed because of the universality of constraint effect and ordering. We may anticipate our discussion of variability in Section 7.6 by noting that this explanation may account for the identity in effect predictability, but it is not certain if it can account for the similarity in the hierarchical ordering. If hierarchical order is unmarked, then it is possible that our general theory can account for it, but if it is a marked order, then it is improbable that it can be accounted for on this basis alone.

Another explanation may be that there is convergence between the two language sources, not only in terms of the processes but also in terms of the hierarchical ordering of constraints. This means, for example, that the ordering of constraints for syllable-final /d/ deletion in Puerto Rican Spanish matches that in Black English. Even though we have not calculated the constraint orders for Puerto Rican Spanish /d/ deletion, this explanation is improbable because of the difference in potential environments observed for the two language sources. For example, it is impossible to replicate for Puerto Rican Spanish the grammatical-marking function of syllable-final /d/ found in English.

The third explanation is that there is a general assimilation of Black English constraint orders by the Puerto Rican groups. The processes are convergent, but the constraint orders on variability are different. The ordering may assimilate while the processes converge. If assimilation of constraint orders is taking place in accordance with the Black English model, it would appear that Black English is a dominant source for the particular process and that the Puerto Rican Spanish process plays a supportive role.

One may question, at this point, whether the order of constraints adopted in an emerging language variety must always directly reflect the order found in one of the source languages: that is, if environment X is a first order constraint, environment Y second order, and environment Z third order in L_1, and environment Z is a first order constraint, environment *Y* second order, and environment *X* third order in L_2, must the order of the variety that results when L_1 and L_2 come into contact directly reflect either L_1 or L_2? Although we would expect this direct reflection in most instances, it does not appear that we can theoretically so limit our expectation. We can anticipate our discussion of new rule emergence in Section 7.5 here by suggesting that there may be an analog with variable constraints. Constraint orders that emerge from L_1 and L_2 contact may result in an order different from either source. For example, a compromise between L_1, in which *X* is a first order constraint, and L_2, in which *X* is a third order constraint, may be reached by making it a second order constraint when the two languages come into contact. While we have no empirical data to support this type of restructuing at present, we would not want to theoretically exclude the emergence of new constraints when languages come into contact (but see the discussion of marking on p. 220).

7.3 *Assimilation variants*. In addition to the interference variants that are predictable on the basis of Spanish influence and the convergent processes of Spanish-influenced English and Black English (vis-a-vis standard English), there are also variants that can be reasonably accounted for only in terms of assimilation to Black English[2]. Our description of [f] as a surface realization of /θ/ is an example of such a case. The variant *f* is not predicted on the basis of Spanish influence; nor is it predicted on the basis of standard English. In accounting for this variant, we must turn to the surrounding black community, the main source of English outside the context of the Spanish neighborhood. Other examples of this type of straightforward assimilation might be found in the monophthongization of certain vowel glides, e.g. *ay* in *time*, *try*, and *ride*; in certain types of negatives, e.g. *Didn't nobody do it* as a declarative sentence; and in certain verb uses, e.g. the use of habitual *be* as in *Sometime he be busy and sometime he don't* (see Wolfram 1971:252-376). It is noted that, at least with phonological features, the assimilation variants can be found among Puerto Ricans with both extended and restricted black contacts. The differences between the two groups are essentially quantitative: that is, we observe a certain amount of black influence in the phonology of both groups, but one group simply shows a higher frequency of the assimilated variants.

The black influence on both groups of Puerto Rican teen-agers may be due to the fact that it is virtually impossible for a Puerto Rican teen-ager in Harlem to avoid some contact with blacks, despite the fact that he may not include them in his peer group. It may be that this restricted contact is insufficient for the assimilation of Black English features to a limited extent. But even if the Puerto Ricans with restricted black contacts do not assimilate phonological features from the sporadic contact they have with blacks, it is quite reasonable to suggest that some assimilation may be acquired indirectly: that is, Puerto Rican adolescents with restricted black contacts may be assimilating phonological features of Black English from Puerto Ricans with more extensive black contacts than themselves.

The frequency levels of assimilation variants show both similarities to and differences from other types of variants. The PRE group as a whole shows a frequency level considerably greater than straightforward interference. Type I convergence, i.e. identical surface realizations resulting from similar underlying units and derivations, appears to reveal somewhat greater relative frequency levels, but Type II convergence, i.e. identical surface realizations resulting from different underlying units and derivations, shows a somewhat parallel type of frequency distribution. The comparison of the two types of convergent processes with straightforward assimilation can be observed by comparing Table 43 with the frequency levels of an assimilation variant. In Table 44, two assimilation variants, the monophthongization of *ay* glides in certain types of environments and the [f] realization for /θ/ in morpheme-final position, are compared with the convergence variants from Table 43. Although we have not specifically discussed the former assimilation variant in this study, our earlier investigation (Wolfram 1971) includes a fairly extensive analysis of this variable. In Black English, there are a number of environments in which the upgliding offset of diphthongs can be reduced or deleted, so that we have a centralized glide or a monophthong. Words like *time*, *try*, and *ride* may be realized as [ta:m], [tra:], and [ra:d] respectively. Although this realization is quite common in some southern varieties of white English, it is not typically used in white dialects spoken in northern contexts such as New York City. There are a number of different environments in which the nonupgliding variant may be realized, but our table only includes the incidence of the variants in word-final position, the environment in which the *a* variant is most likely to occur. The tabulations for the convergent features are taken from Table 43. For /d/ deletion, we have included only the tabulations for a following nonvowel, and for word-final cluster, we have included only the tabulations for a following vowel. These environments are chosen since they are the most socially diagnostic.

The two examples of assimilation in Table 44 indicate similar frequency distributions. In both cases, there is a nonsignificant difference between the frequency levels of the blacks and the Puerto Ricans with extensive black contacts, but the Puerto Ricans with restricted black contacts reveal a reduced frequency by comparison. This is quite unlike Type I

Table 44. Comparison of convergent and assimilation variants for BL, PR/BL, and PR informants.

	BL	PR/BL	PR
CONVERGENCE			
Type I - Ø for d			
No./Total	114/295	113/170	314/567
% del.	38.6	66.5	55.4
Type II - Word-final cluster reduction			
No./Total	120/222	65/133	253/561
% del.	54.1	48.9	45.1
ASSIMILATION			
f for θ			
No./Total	36/44	20/23	53/97
% f	81.8	87.0	54.6
a for ay			
No./Total	190/247	104/148	261/657
% a	76.9	70.3	39.7

convergence, where both Puerto Rican groups significantly exceed the frequency level of the black group. In all cases, however, a higher frequency level is realized by the Puerto Ricans with extensive black contacts. This general tendency is indicative of the persistent differences that arise between the two groups of Puerto Rican speakers.

Although our comparison of assimilation and convergent features here is quite specific to PRE, it is quite likely that similar language contact situations would reveal analogous patterns. This demonstrates the necessity of looking at the interaction of quantitative and qualitative dimensions of languages in contact. The different frequency distributions can be accounted for only by looking at the structural relations that can exist between the languages.

7.4 *Grammatical and phonological assimilation*. In the preceding section, we have limited our discussion of assimilation phenomena primarily to phonological assimilation. It should not, however, be assumed that grammatical and phonological variants will necessarily assimilate in exactly the same ways. In fact, there is some evidence that there is quite a basic difference in assimilation when separated on the basis of phonology and grammar. We have seen that, to some extent, the influence of Black English phonological features is common to Puerto Ricans with both extended and restricted black contacts, the differences between groups being quantitative. We thus see that a feature like the [f] realization of morpheme-final //θ// is an integral part of most varieties of PRE. On the other hand, our examination of negative constructions in Chapter Six seems to indicate that the same is not true for grammatical features. Those aspects of negation unique in New York City to Black English appear to be much more restricted to Puerto Ricans with extensive black contacts, if they are to be found at all.

The basic difference between the two types of features can be illustrated by contrasting a Black English grammatical feature with one of the phonological features we have previously discussed. One grammatical feature that is considered unique to Black English is the use of "distributive be". This particular grammatical feature has been described by a number of linguists who vary slightly in their analysis, but who generally agree that it refers to a repeated occurrence of some type (see Fasold 1969a:746). The distributive function of *be* is illustrated in sentences such as:

(124) a. He don't usually be home.

b. Sometimes he be at home; I know he do.

In Table 45, the distribution of distributive be is given for nine informants: three informants each representing Black English speakers, Puerto Ricans with extensive black contacts, and Puerto Ricans with restricted black contacts. These informants, chosen on the basis of nonlinguistic criteria (see Wolfram 1971:252-376 for the criteria used to select them), represent typical informants in each of the cultural categories. For these same informants, we have tabulated the incidence of a for ay as a representation of a phonological assimilation.

Table 45. Comparison of grammatical and phonological assimilation for selected BL, PR/BL, and PR informants.

	BL	PR/BL	PR
GRAMMATICAL ASSIMILATION			
Distributive be			
No./Total	20/53	7/46	0/33
% be	37.7	15.2	0.0
PHONOLOGICAL ASSIMILATION			
a for ay			
No./Total	191/277	122/262	59/318
% a	69.0	46.6	18.6

If these two features are typical of how grammatical and phonological features assimilate, then we see quite an apparent difference. Phonological features appear to be much more susceptible to assimilation than are grammatical ones. The main differences in phonological assimilation, as indicated by the Puerto Rican groups, is one of quantity, but there appears to be a qualitative difference in grammatical assimilation.

Distributive be is categorically absent in the speech of Puerto Rican informants with restricted black contacts. Apparently, it is only through direct peer contact that extensive grammatical assimilation takes place.

Another essential aspect of grammatical and phonological assimilation relates to the way in which these features are assimilated. Where both grammatical and phonological processes are assimilated in the speech of Puerto Ricans (mainly of Puerto Ricans with extensive black contacts), the grammatical processes are assimilated as grammatical processes and the phonological processes as phonological ones. At first glance, this might appear to be a trivial observation, but a closer examination of some of the features that might be interpreted to result from either a grammatical or a phonological process indicates that this is a significant discovery. For example, suffixal Z absence in Z_1, e.g. cent for cents; in Z_2, e.g. boy hat for boy's hat; and in Z_3, e.g. He run for He runs, may be the result of either a phonological or a grammatical process (see Wolfram 1971 for a description of suffixal Z). Likewise, certain types of suffixal D absence in D_1, e.g. The man walk out yesterday; in D_2, e.g. He was mess up; and in D_3, e.g. The mess-up man, may be the result of either a phonological or a grammatical process. Fasold (1971) clearly demonstrates the potential ambiguity of various surface realizations and the criteria for determining whether these realizations are the result of phonological or grammatical processes. He specifically mentions characteristics that help determine whether the absence of a particular surface form is the result of phonological or grammatical rules; these characteristics can be summarized as follows:

1. If the absence is accounted for syntactically, it is expected that the operations in the phonological component will have no influence on the output, but if

it is the result of phonological deletion rules, the deletion should be heavily influenced by phonological characteristics.

2. Irregular forms will be affected in grammatical deletion.

3. Hypercorrection will be evident if the absence of a surface form is due to the lack of underlying units in the syntactic component. If, however, surface absence is due to the deletion of a low-level phonological rule, hypercorrection will not be expected.

4. Grammatical sensitivity will be more evident in cases in which surface absence is due to grammatical rules, whereas surface absence that is the result of phonological rules will evidence phonological sensitivity: that is, grammatical variability will likely reveal sensitivity to grammatical environment and phonological variability to phonological environment.

5. Phonological deletion of segments that function as grammatical markers will reveal analogous deletion of segments that are not grammatical markers, whereas grammatical deletion will not.

Applying Fasold's principles to suffixal Z and D absence in Black English, it has been concluded that Z absence in Black English is the result of a grammatical process and D absence the result of a phonological process. Suffixal Z absence affects all morphophonemic realizations of underlying Z, e.g. /z/, /s/, /ɨz/, whereas D absence is primarily restricted to certain phonological shapes of D. Furthermore, irregular past tense verbs are not affected by the phonological process effecting D, e.g. go - went; regular past tense formation that results in clusters subsequently reduced by a word-final consonant cluster reduction rule is affected. Postulating that there is no underlying Z_3 morpheme, it is found that Z_3 hypercorrection, e.g. I goes, you goes, etc., is observed to a considerable extent in formal situations by some speakers of Black English. It is further noted that suffixal D is very sensitive to a number of phonological constraints, e.g. following vowel or nonvowel, stop + stop cluster as opposed to stop + continuant cluster, etc., whereas suffixal Z is sensitive to grammatical constraints, e.g. whether it is Z_1, Z_2, or Z_3. And, finally, suffixal D deletion shows a clear analog to phonological processes that operate on identical segments not functioning as grammatical markers, e.g. mist reveals deletion of the final t as in missed, whereas suffixal Z does not reveal the same close parallelism.

Although some of Fasold's criteria for determining phonological and grammatical processes are not completely relevant to the study of D and Z morphemes in PRE, we come to the same conclusion concerning suffixal D and Z deletion: D deletion is primarily the result of a phonological process, whereas Z deletion is the result of a grammatical process. For example, as observed in PRE, D deletion shows the sensitivity to phonological constraints on variability that we expect of phonological processes, whereas Z deletion does not. And there is a clear parallelism in the deletion of grammatical- and nongrammatical-marking d and t, whereas Z does not show nearly the same tendency. The observation that suffixal Z absence is the result of a grammatical process is particularly significant when we realize that Z deletion in Puerto Rican Spanish may be the result of a phonological process in which syllable-final s may be deleted (see Ma and Herasimchuk 1968). At some stages in the acquisition of English by Spanish speakers, it is possible that suffixal D deletion may be due to grammatical rules, but it is quite clear that it is the result of a phonological process in the PRE we are studying here.

To say that grammatical and phonological processes in

Black English will be assimilated as grammatical and phonological processes respectively in PRE does not, however, necessarily imply that the same general grammatical and phonological processes will be involved, although we would suspect that this would be the case in most instances. We are simply claiming that the same general level of the language component is responsible for the derivation of surface forms. For example, some speakers of PRE with restricted black contacts show ARE copula absence, e.g. You nice, They nice, as an integral part of their dialect, while showing little or no incidence of IS deletion, e.g. He nice (see Wolfram 1971:314-26). For these spakers, it seems reasonable to hypothesize that ARE deletion may be related to the r-lessness that is quite typical of both black and white speech in New York City. In the first stage, r is reduced to a schwa-like quality, and in the second stage, the phonetic vestige of r is eliminated. This phonological process is somewhat different from the general rules for copula deletion including IS and ARE that Labov (1969) has postulated, but like his account of copula deletion for Black English, it originates in the phonological component of PRE.

At this point, we can only hypothesize as to why phonological features are more subject to widespread assimilation by Puerto Ricans than are grammatical ones. One possible reason may relate to the nature of the linguistic levels involved. For one, the units of phonology are a relatively small, closed set of items that occur, for the most part, with quite high frequency. The restrictions of the inventory and the relatively high frequency with which the units occur may make phonological items more susceptible to assimilation through indirect means or restricted contact. Or we may suggest that the more superficial the level of language involved, the more susceptible it is to borrowing. Since phonological rules operate on a much more superficial level of language than do grammatical rules, they are more susceptible to borrowing.

One might also hypothesize that the difference in the assimilation of phonological and grammatical phenomena is due to sociocultural reasons. Previous studies of socially diagnostic linguistic variables (Wolfram 1969) indicate that grammatical variables differentiate social groups more sharply than do phonological ones: that is, various social groups are more definitively marked on the basis of grammatical features. Given the fact that Puerto Ricans with restricted black contacts often negatively view linguistic assimilation from blacks (see Section 2.5.5), it may be suggested that the relative obtrusiveness of grammatical features makes them less susceptible to borrowing than the less obtrusive phonological ones. Linguistic and sociocultural explanations for the difference in assimilation phenomena are, of course, not mutually exclusive. It is quite possible that they reinforce each other.

7.5 The emergence of new rules. Thus far in our discussion, we have allowed only for rules in PRE that are the direct result of either some aspect of Spanish influence or assimilation to the English of the surrounding community. Theoretically, then, only those realizations that are predictable on the basis of Puerto Rican Spanish or the surrounding dialects of English, e.g. Black English of the immediately contiguous community, standard English of the classroom, etc., are recognized. This assumes that there is an isomorphic correspondence in the rules of PRE and the rules of the source languages or dialects. This assumption appears to be an integral part of many models of bilingualism, whether one essentially views the bilingual as having one merged system, coexistent systems, or a combination of the two in which parts of the system are merged and other parts coexistent. For example, Fasold, in summarizing the viewpoint of coexistent systems in bilingualism, observes:

> This model, assuming completely disjoint coexistent systems, accounts for the speaker's syntactic competence as long as he produces no ungrammatical sentences in either language which are traceable to rules in the other (Fasold 1972:138-39).

According to this viewpoint, languages in contact will not step outside the bounds of either of the languages. What these traditional views disallow is the operation of rules that might not be related isomorphically to one of the source languages or dialects. This is, in fact, true in the vast majority of cases. Thus, the instances of //θ//, //d//, and multiple negation could, for the most part, be related directly to either surrounding dialects of English or Puerto Rican Spanish. It therefore might be compelling to conclude that the traditional assumption is, in fact, quite correct.

Before doing so, however, we must recall our description of pleonastic tense marking (Section 6.1.3). In negative sentences containing the auxiliary *do*, we have observed that tense may be marked pleonastically in the auxiliary and in the main verb, giving us sentences like *I didn't did it* and *I didn't meant to say it that way*. We further see that this construction cannot be directly related to Puerto Rican Spanish, Black English, or standard English. As we have mentioned earlier, there is a plausible explanation as to how this construction arises in the process of language acquisition through indirect influence that results in rule generalization. However we wish to explain it, we are still confronted with a rule that does not have a direct parallel in any of the source languages. Thus, a view of languages in contact that accounts only for direct rule correspondence is inadequate.

For example, consider Fasold's (1972:138-39) model of interference from disjoint systems. He suggests a model in which a speaker may follow only the rules from one language or the other. In terms of Spanish-English bilingualism, we can illustrate this by a sentence such as *He no likes the city*. In this sentence, English rules are followed until the realization of the auxiliary is required for the negative. At this point, there is a shift to the Spanish rule. If we adopt Fasold's schematic representation, this can be illustrated as follows:

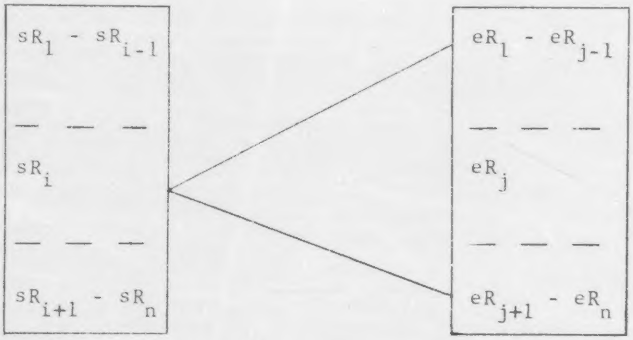


Figure 8. Traditional bilingual interference model: Spanish-English.

English rules are followed until the placement of the negative on the auxiliary is required, at which point there is a transference to Spanish. This is represented by sR_i in the above diagram. After that point, there is once again a return to the English rule system. Such a model, however, does not provide for the innovation we are talking about. In this case, we have a new rule, which may be represented in Figure 9.

In the following diagram, we can account for the innovative aspects of interference found in the new rule. In addition to the more usual types of interference diagrammed in Figure 8, possibilities for innovation must be accounted for

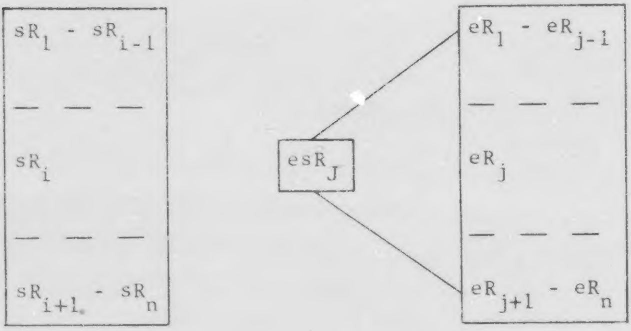


Figure 9. Bilingual interference model accounting for rule innovation: Spanish-English.

in a realistic model of bilingual interference[3]. It seems reasonable to expect that the majority of these innovations will be the result of rule generalization. Since structural hypercorrection may be a manifestation of rule generalization (see DeCamp 1972), it stands to reason that hypercorrection is one of the main sources for this type of innovation[4]. In our diagram, the relationship between the regular English rule and the new rule is indicated in the subscripts. The same subscript letter is used, but the new rule is now assigned a capital subscript, while the alternative rule remains lower case.

When new rules result from rule generalization, it is quite possible that interference phenomena may show certain parallels with first language acquisition because of a universal disposition for certain types of generalization. It is therefore interesting to note that the pleonastic tense marking that we have described for PRE is also found in monolingual children acquiring English[5]. Although we have only cited the example of rule generalization, it is not at all certain that rule innovations should be theoretically limited to this phenomenon. It is possible for new rules to be developed by "false analogy" or as compromise linguistic solutions to quite divergent rules. The essential point is that we must recognize this sort of innovative process in our theoretical construct of second language interference.

Since it appears that some of these new rules that arise may be representative of transitional stages of acquisition, we may ask what eventually happens to these types of innovations in a developing language community. There are two options. One is to stabilize such types of innovations so that they remain an integral part of the speech community. This can take place, of course, only if this community resists complete assimilation to the language of the surrounding community. This would appear to be the case for a community of speakers that has developed a unique dialect, such as the Pennsylvania Dutch in southeastern Pennsylvania. On the other hand, innovative features may be lost as a variety moves toward complete assimilation. At this stage in the development of PRE, it is impossible to determine exactly what is happening with regard to pleonastic tense. There are, however, several factors that seem to indicate that it will eventually be eliminated. For one, it is presently used by a minority of informants (though at significant levels of occurrence). Thus, it only characterizes one variety of PRE. And when we look at the informants who use it, we find that it is those informants for whom the incidence of vestigial interference is most typically found. These informants seem to be the followers rather than the leaders with respect to language change. The minority proportion of informants who use the construction and the lingering incidence of vestigial interference in these informants' speech would therefore seem to indicate that it will be eliminated rather than stablized in the development of PRE. This is consonant with the tendency toward assimilation to the surrounding English dialects by second generation Puerto Ricans in New York City.

7.6 Linguistic variability and variable rules. Fundamental to our entire sociolinguistic description of PRE is the study of linguistic variability. As we have discussed in Chapter Three, the study of linguistic variability adds an entirely new dimension to the study of language in its social context. On a formal level, we have observed that systematic variability can be incorporated into our description of PRE. Following our description of PRE from this perspective, it is appropriate to look again at the suppositions on which the theory of variable rules is based. Are such rules justified, and, if so, in what form?

As we have discussed in Chapter Three, a primitive supposition for variable rules is the notion of inherent variability. We have operated on the assumption that patterned fluctuation cannot be dismissed arbitrarily either as code switching across different linguistic systems or as systematically irrelevant dialect borrowing. Historically, of course, much of what we now call inherent variability may have originated as dialect borrowing, but this fact does not mitigate our responsibility to account for fluctuation as an intrinsic part of a language system. It has sometimes been claimed that theoretically all fluctuating items can deterministically be accounted for through the provision of more detail on linguistic and/or sociopsychological conditioning. Although this claim cannot be disproved logically, none of the existing data appears to support such a position (see Sankoff 1972). The observed fluctuation in the most constant of styles and environments cannot be ignored if we are to give an adequate account of language system. We are further confronted with structured sensitivity of fluctuating forms to linguistic constraints on variability. The integral role of variation in PRE simply confirms what has been observed in other studies of real language behavior.

In the preceding paragraph, we have mentioned that intrinsically variable items often show a great deal of structured sensitivity to independent linguistic constraints. This raises the question of whether this sensitivity is a unique characteristic of inherent variability: that is, can dialect mixture or borrowing be distinguished from intrinsic variation on this basis? Although it may be tempting to set this up as a criterion for distinguishing these two concepts on a formal linguistic basis, it should be cautioned that this position may not be justified when looked at in closer detail. If we assume that certain aspects of constraining effects are universal (see p. 221), then it might be quite possible for certain types of dialect mixture to show considerable sensitivity to linguistic constraints in the borrowing language. For example, suppose that L_1 does not have any word-final consonant clusters but that L_2 does. A speaker of L_1 borrows a word from L_2 that ends in a consonant cluster. In some instances, it is observed that the cluster is intact, and in other instances, it is reduced in order to conform to the morpheme structure sequence rules of L_1. One would predict that the cluster would have a tendency to be reduced more frequently when followed by a vowel than when followed by a consonant for natural phonetic reasons, i.e. the more consonants in a sequence, the more difficult it is to produce the sequence. It seems apparent that such items will reveal ordered constraints on variability. If one maintains that any item that reveals this type of sensitivity must be considered as an integral part of language variety, then it would appear that the concept of dialect mixture is completely unjustified. Although we may wish to retain the concept of dialect mixture on other bases, the systematic linguistic constraints on variability apparently cannot be useful criteria.[6]

Another premise on which variable rules are based is what we have labeled "replicable regularity" (see Section 3.2.2).

The regularity of constraining factors on variability supports our contention that structured variation must be accounted for in our representation of a speaker's language competence. The actual frequency levels appear to be part of a speaker's performance and, as such, only have heuristic value for the establishment of constraint orders of more or less. Recently, Cedergren and Sankoff (1972) have attempted to extend the notion of competence to include some of the probablistic aspects of variable rule occurrence. They distinguish rule probabilities from rule frequencies, assigning the former to competence and the latter to performance (Cedergren and Sankoff 1972:38). Although the distinction between rule probabilities and frequencies may extend a theory of performance, at this time it is difficult to see why probabilities should be included as an aspect of abstract competence. This appears to be making a claim that is too strong in terms of a speaker's capability in his language. The crucial aspect of the speaker's competence in variable rules is, in our interpretation, the hierarchy of constraining effects, and all other aspects appear to be part of performance. Future studies of psycholinguistic abilities, however, may show that this claim will have to be modified as we ultimately attempt to account for the capabilities of the human mind.

In the preceding chapter, the actual description of variation was based on groups of speakers, but a comparison of the tabulations for individual speakers would typically reveal parallel constraint effects: that is, if we take the constraints we have formalized for PRE and compare them for individual PRE speakers (as we did for consonant clusters in Table 4), we would find the constraints to be quite regular from speaker to speaker. There are, however, two exceptions to this regularity that may make the characterization of the speech represented for the social group as a whole appear to be more systematic than does the speech of the individual. In some cases, there are not sufficient examples in some of the subcategories of the constraints to reproduce the clear-cut effect of the constraint orders as it is represented for the group as a whole. This type of inconsistency arises simply from the limited number of examples available for a given informant and would be remedied by a more adequate population of examples. There are, however, also instances when there appear to be sufficient examples for discovering the regularity for individual speakers that we have represented for the group; yet, we do not obtain the expected regularity. These cases are somewhat more difficult to dismiss. It is important to note that these instances are restricted to cases in which the ratio of effect on the various constraints is relatively close. For example, suppose we have a case in which the ratio of the geometrically ordered constraints on variability is as follows:[7]

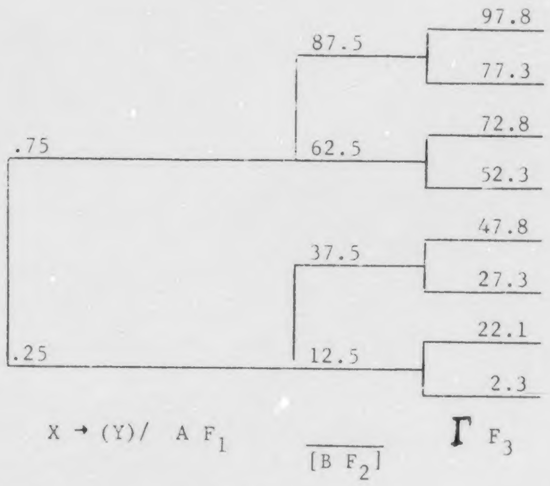


Figure 10. Theoretical hierarchical ordering of three constraints showing different effect ratios.

In the above ordering, we would certainly not expect individual deviation in terms of the first and second order constraints. But the second and third order constraints might reveal less regularity because their relative effect is somewhat closer. It would appear that the closer two constraints are in terms of the ratio of their effect, the more likely it is that we can find some individual discrepancy in the ordering of constraints. For example, if the effect of one constraint is 4 to 1, i.e. the rule will be effected 4 times in a given environment to every 1 time that it is not, and the effect of another constraint is 5 to 4, we would certainly not expect differences in the ordering of constraints among individual members of a relatively homogeneous community. But if the effect of one constraint is 4 to 3 and the effect of another constraint is 5 to 4, then we might expect some individual reordering of constraints, even within a relatively homogeneous group of speakers.

For the most part, of course, we are impressed with the amazing consistency with which constraints are ordered identically from speaker to speaker and, in this study, from social group to social group. The main differences between groups are only matters of relative frequency. The actual comparative ratios that might make two constraints susceptible to individual differences in ordering are, of course, arbitrary at this point. We would certainly expect two constraints with effect ratios of 9 to 8 and 8 to 7 to be more susceptible to a certain amount of individual variation. But the actual cutoff point for constraint reordering (and, in fact, the cutoff point for representing constraints formally in the grammar) is quite arbitrary and can be determined only through investigation. In a sense, the difficulty in determining the cutoff point is a reflection of the hazy interface that exists between competence and performance. Eventually, it may be possible, however, to specify the cutoff point at which individual reordering can be expected by relying on a mathematical base for our formulation.

From a purely practical standpoint, there are difficulties in dealing with a great number of constraints, since the number of subdivisions in the geometric ordering is doubled every time another constraint is introduced. This means that if we isolate 7 constraints, it is possible to get 256 branchings in the hierarchy, i.e. 2, 2x2, 2x4, 2x16, 2x32, 2x64, 2x128 = 256. The expectation of getting sufficient examples to adequately determine the ordering of constraints naturally diminishes as the number of branchings proliferates. In most instances, we find that the clear-cut effect on variability is quite high in the first several orders of constraints, but that it tends to diminish after that.

A problem of more theoretical consequence arises when all the branchings necessary to establish hierarchical orderings are not logically possible, either because of the features of a specific language variety or because of metatheoretical constraints on human language. The logical impossibility of some categories may disallow observing cross-products crucial for establishing the rank orders. This problem, which has arisen at various stages in this study, has also been confronted by Fasold (1972). Although we might calculate expected frequencies for hypothetical categories in order to establish our geometric ordering, the theoretical implication of this observation is that strict geometrical ordering may be too strong a requirement.

In the above paragraphs, we have tried to account for certain apparent irregularities that may arise in the ordering of constraints for a relatively homogeneous group. It is, of course, also necessary to recognize that structural reordering of constraints may take place in social or temporal space. It is quite possible, as demonstrated by Labov et al. (1968), that constraint reordering may be a function of regular language change. In the case of regular reordering, however, it seems quite possible to expect that susceptibility to imminent change may follow the same sort of distribution we found for individual variation. For example, we would expect two constraints with effect ratios of 5 to 4 and 6 to 5 to be susceptible to imminent change, while constraints having ratios of 5 to 1 and 6 to 5 would not be nearly as susceptible.

One must caution, at this point, that the mathematics of constraint reordering must not be considered apart from, although it can be considered complementary to, the notion of marking in constraint orders. If it is true, as Bailey (1973b) suggests, that constraints are typically reordered from marked to unmarked orders, then it is possible for constraint reordering to counteract reordering changes we might predict from a purely mathematical base.[8] Suppose, for example, that we have three environmental constraints in a given variable rule: *X*, the first order constraint, effects a 50 percent frequency level for the occurrence of a given form; *Y*, the second order constraint, a 45 percent frequency level; and *Z*, the third order constraint, a 40 percent frequency level. If they are already in their unmarked order, the order would not be expected to change, despite the closeness of the effect ratios. (They may, of course, merge and reduce the number of constraint orders.) On the other hand, if both *X* and *Y* are in an unmarked order with reference to each other, but both *X* and *Y* are in a marked order with reference to *Z*, then *Z* may be reordered before both of them, while the order of *X* and *Y* with respect to each other remains intact.

In the previous discussion, we have attempted to justify a general theory of variable rules. But the justification of a general theory of optionality does not warrant the actual incorporation of variable rules into PRE. Our rationale for this must come from the supposition that variable constraints are language specific. In Chapter Three, we have noted that there are two issues involved in the question of constraint universality: "effect predictability", the particular type of environment and the effect it will have on variation; and "order predictability", the hierarchical arrangement of constraints.

In our study of PRE, we have seen that the effect of linguistic constraints on variability tends to confirm the effects found in other studies, such as Labov et al. (1968), Wolfram (1969), Legum, et al. (1971), and Fasold (1972). For example, we observe that a following consonant consistently favors the deletion of a preceding consonant when the latter is part of a consonant cluster. We also find that nongrammatical markers favor deletion when compared with grammatical markers. Similarly, we observe that elements occurring in unstressed syllables are more likely to be deleted or modified than are elements found in stressed syllables. In these cases, we may suggest that the effects of linguistic constraints on variability are universal. Although we can hypothesize the effect that a given environment will have on variability, it is obvious that there are certain conditions that must be met for the operation of these predicted effects. For example, we stated above that we would typically expect the absence of grammatical marking. But Cedergren (personal communication) suggests that this should be qualified so that it applies only to grammatical markers that are not transformationally introduced[3]. Without clear counterevidence, it is most reasonable to claim that effect predictability is part of a general metatheory of optional rules.

If constraining effects are universal, then it is unnecessary to indicate what the favoring effect is for a specific language. In our description, we have indicated whether the + or - value favors the operation of a rule, but this information is apparently redundant since it can be predicted on the basis of our metatheory. For example, it is unnecessary to specify that [-stress] favors the application of the syllable-final /d/ rule; it is sufficient to state [stress] without any explicit plus or minus value as favoring the rule application. The metatheory of optional rule application will imply the value that will favor or inhibit rule application.

Whereas it is quite reasonable to suggest that constraint effect is not language specific, the same claim cannot be made with reference to the hierarchical ordering of various constraints. The comparison of heterogeneous language communities indicates different orders of constraints. If we cannot predict hierarchical orders on the basis of our general theory, then such information must be incorporated into our particular grammar of a language. There may, however, be some conditions under which we need not specify particular hierarchical orders based on the notion of marked and unmarked orders. If we can formulate what the unmarked orders are, then it would be sufficient to allow our general theory of marking to account for the specification of a hierarchical order, if it is unmarked. For a specific language, we need formally state only those constraints that follow a marked rather than an unmarked order. At this point, there are practical problems involved in formally following this principle since we do not have a comprehensive catalog of unmarked hierarchical orders as a part of our metatheory, but this is an empirical deficiency that does not affect the theoretical validity of this position.[10]

7.7 Conclusion. Although the study of PRE in Harlem has sufficient value in itself to warrant descriptive study, this discussion has been concerned more with general sociolinguistic principles that emerge from the study of this language contact situation. This language situation has allowed us to apply some of the recent insights of sociolinguistic variability to a unique contact situation in which several different sources may account for a resultant dialect. In particular, we have seen that the application of a quantitative dimension to the study of fluctuating speech behavior results in the emergence of important observations concerning the relative effect of linguistic assimilation. No doubt some of the principles that we have focused on will have to be revised or abandoned on the basis of further empirical data, but we are impressed with the convergence of our study with variable studies conducted on other populations. Linguists who strive for the goals of descriptive and explanatory adequacy in current linguistic theory can no longer afford the luxury of cavalierly dismissing the systematic nature of language variation.

NOTES

1. Since we are dealing here with a limited example, we will eliminate the t variant in our discussion of interference, despite the fact that it is quite a legitimate interference variant.

2. This is not to say that the features discussed previously are necessarily unique to Black English, since many of them can also be found in southern white speech. However, in a northern context such as New York City, they are found only in black speech due to the transformation of many southern features into class and ethnic patterns in a northern context.

3. This does not mean that scholars of bilingualism have not observed the occurrence of certain types of innovations. There is occasional reference to it in the literature (Weinreich 1953:40-41), but its implications for models of bilingual interference seem to be ignored.

4. DeCamp (1972:87) points out that hypercorrection implies

rule generalization but that the converse is not true: that is, rule generalization does not necessarily imply hypercorrection. For a rejection of this position, see Bailey (1973b).

5. My four-year-old son went through a stage of approximately six months during which pleonastic tense marking was a very common phenomenon. In his case, he had a more general version of Rule (70) described in Section 6.1.3.

6. There does not appear to be any formal linguistic basis for distinguishing these two notions. Both Fasold and I have maintained that certain types of hypercorrection may help identify dialect mixture, but hypercorrection itself is a concept that cannot be justified on a purely linguistic basis; hypercorrection necessarily involves certain linguistic processes and certain social phenomena (see DeCamp 1972:90).

7. We have assumed throughout this description that hierarchical effect of constraints is geometrically ordered. This is based on our supposition that the variable constraints operate independently. If we found that there were certain significant synergistic effects in the combination of constraints, a geometrically ordered hierarchy would have to be abandoned. In the absence of conflicting data, our assumption of geometric ordering appears to be most reasonable.

8. There are several apparent exceptions to the principle that change in marking always involves going from marked to unmarked members. For example, a lower level change may go from an unmarked to a marked member in order to accommodate a higher level change from a marked to an unmarked member. This exception, however, is only apparent in that it follows the principle on a higher level. A more real exception is found in the case of language creolization, in which maximal unmarking eventually acquires a representation of marking.

9. Cedergren's (personal communication) qualification is supported by data on Panamanian Spanish that show that /r/ is more often deleted when it is [+ infinitive] than when it carries no grammatical marking. The grammatical marking of /r/ in this case is transformationally introduced.

10. Evidence for marking comes from the order of acquisition by children, linguistic change, neutralizations, and statistical universals, according to Bailey (1973b).

APPENDIX A : QUESTIONNAIRE

Tape No. ________

INFORMANT DATA SHEET

(To be completed after the interview)

Name ______________________________ Age __________

Address ____________________________ Race _________

Grade __________________ School ___________________

Parents' Birthplace:

Father ________________ GF _______________________

GM _______________________

Mother ________________ GF _______________________

GM _______________________

Occupation of head of household ____________________

Highest grade level of head of household ____________

How long lived in New York ________________________

Other places lived ____________________________

Race of peer contacts __________________________

Section I: Free Conversation

A. Games and Leisure

What kinds of games do you play around the neighborhood (stickball, games with bottle caps, marbles, handball, flying pigeons, etc.)?

How do you play these games (rules for the games, deciding who's IT, etc.)?

Do you follow any of the New York sports teams? What do you think of the Mets this year? How about the Knicks for next year (or Joe Namath and the Jets)?

What are your favorite TV programs? Describe a recent program.

What is your favorite movie of all time? What happens? (If you can elicit movies without trouble, ask about West Side Story and an opinion of how life in Harlem is portrayed in this movie.)

Tell me about your experience here at camp. Describe a typical day. Contrast this with the city day.

B. Peer Group

How about the guys you hang around with? In this group is there one guy that everybody listens to? How come?

What makes for a leader in the group (tough, hip with girls, good sounder, etc.)?

Do the guys in the group sound on each other? How does this work? What do you sound on? Can it be true, etc.? (If rapport is right, get some sounds.)

What makes a good sounder?

Say a new kid moves into the tenement. Is there any way he can get into your group?

Who are some of the guys you're tight with? Name some.

Of the guys you named, are there any Negroes? Puerto Ricans in the group? How about whites?

Any of these guys speak Spanish? How about their parents?

C. Aspirations

How about when you're through with school? Any idea of what you might do? What does a ______________ do?

If someone came up to you and said, "Here's all the money in the world", what would you do with it?

What is a successful man? (If informant responds, have him define unsuccessful, good, bad, smart man.)

D. Fighting and Accidents

What kinds of things do fights usually start about on the street?

Any rules for a fair fight? (How about if someone was kicking somebody or hitting them with a chain or lead pipe, what would you do?)

Ever see anybody get beat up real bad? What happened?

Do the kids around here still fight in gangs? How do these start? (If answer negatively, pursue why gang fights have stopped.)

Ever been in a hospital, or automobile accident? Describe.

How about a situation where you thought, "Man, this is it, I'm gonna die for sure now"? What happened?

Section II: Cultural Values

I would like you to define some things for me as you look at them. I'll give a sentence and you complete the sentence. For example, if I say, "A good sounder is somebody that....", you might say "...always has something to come back with".

1. The leader of a group of guys is somebody that ________.

2. A smart person is somebody that ________.

3. A person with common sense is somebody that ________.

4. If a guy gets a girl into trouble, he should ________.

5. If you're going to get into a fight, the best weapon to have with you is a ____________ because ____________.

6. A tough dude is somebody that ____________.

7. The thing I like the best about Harlem is the fact that ________________.

8. The thing I like the least about Harlem is the fact that ___________.

9. If you want to be hip with girls, you gotta ____________.

10. The best way to make it in this world is to ____________.

Section III: Auxiliary Probe

Sample Stimulus	Sample Response
1. My cousin should do his work. Should what?	I know he should. Do his work.
2. Daryl hit his brother. Did what?	I know he did. Hit his brother.
3. He will be five next month. Will what?	I know he will. Be five next month.

Stimulus

1. José can drive a motorcycle.

2. María put it down.

3. The lady a teacher.

4. If he got a walkie talkie, he be happy.

5. He ain't see the boy.

6. John wants you to leave.

7. The people over at my house now.

8. You walked home.

9. Sometime Joseph be up there.

10. He should work harder.

11. He be here in a few minutes.

12. Daryl got a brother.

13. He will explain that to you.

14. Dwight been met that girl at the pool.

15. He could be at the country club now.

16. Every day last year he be at the pool.

Section IV: Possessive

Now, we're going to ask you to fill in the blanks in a different kind of question. If I said, "This man has a hat", you might say, "It's not the woman hat, it's the ________".

(Note: It is very important that you say "woman hat", not "woman's hat". The same is true for all questions in this test. If an informant corrects you, you may begin saying "woman's hat", etc.)

1. This girl has a bike. It's not the boy bike, it's the ____________.

2. This dog has a bone. It's not the cat bone, it's the ____________.

3. This mouse has some cheese. It's not the rat cheese, it's the ____________.

4. Jack Johnson has a car. It's not Paul Brown car, it's ____________.

5. Derrick Black has a toy. It's not Paul Brown toy, it's ____________.

Section V: Word-Final Consonant Clusters with -ing

Now, I'll give you a different exercise, and you see if you can make the sentences the same way I do in these examples.

Sample Stimulus	Sample Response
1. They eat.	They eat. They are eating.
2. They play.	They play. They are playing.
3. They buy things.	They buy things. They are buying things.

Stimulus

1. They rest.
2. They ask.
3. They paste it.
4. They bust it.
5. They lift it.
6. They test it.
7. They risk a chance.

Section VI: Plurals

Now, I'll show you a picture of something. It may be something you've seen before, or it may be something you've never seen. Then I'll show you a whole bunch of the same thing and ask you what they are. (Use No. 1 as an example.)

1. This is a tree. Now here's a bunch of them. What are they?
2. This is a lun. I bet you never saw one of them before. But if you did, these would be a bunch of ____________.
3. This is a desk. And these are ___________.
4. This is a biz. And if you had a whole bunch of them, they would be ______________.
5. This is a fust. And these would be a bunch of _________.
6. This is a foot. And here are two ____________.

7. This is a box. And these are ____________.

8. This is a cent. And now there are three ___________.

9. This is a dollar. And now there are three _________.

Section VII: Passive Test

Sample Stimulus	Sample Response
1. Yesterday somebody kicked him.	1. Yesterday he was kicked.
2. Yesterday somebody followed him.	2. Yesterday he was followed.
3. Yesterday somebody killed him.	3. Yesterday he was killed.
4. Yesterday somebody found him.	4. Yesterday he was found.

Stimulus

1. Yesterday somebody punched him.
2. Every day somebody rob him.
3. Every day somebody grab him.
4. Right now somebody like him.
5. Every day somebody cheat him.
6. Right now somebody hear him.
7. Right now somebody's shooting him.
8. Yesterday somebody was chasing him.
9. Right now somebody's scaring him.
10. Yesterday somebody was holding him.

Section VIII: Reading Lists

(Use cards for informant.)

WORD LIST

hut
wolf
hot
woof
month
sold
boat
soul
vote
so
code
feel
coal

sin
west
sing
Wes
pass
bet
past
bat
caught
side
coat
shoe
mass

chew
deaf
jello
mother
right
kite
school
Tom
Sam
sod
sad
boil

pin
pen
desks
watch
find
wash
fine
clothe
tooth
arithmetic
Catholic
yellow
death

MINIMAL WORD PAIR LIST

rows	rose	side	sod
run	rum	shoe	chew
hut	hot	mass	mask
sold	soul	deaf	death
boat	vote	yellow	jello
sin	sing	time	Tom
rain	reign	pin	pen
west	Wes	watch	wash
bet	bat	boil	ball

APPENDIX B : FOLLOW-UP INTERVIEW

1. How long have you lived in Harlem or the Bronx? ________
2. Where else have you lived in your life? ________
3. Where do most of your friends live, e.g. in the immediate neighborhood? If not, why not? ________
4. Where do you spend most of your time outside of school, i.e. what streets, etc.? ________
5. Are most of the teachers at your school black, Puerto Rican, other? ________
6. Are most of the students at your school black, Puerto Rican, other? Try to estimate: 3/4, 1/2. ________
7. Are the people in your neighborhood mostly black, Puerto Rican, other? ________
8. If you were in trouble and needed help, who would you talk to?________
9. Is he/she black, Puerto Rican, other? ________
10. At your church, are most of the people black, Puerto Rican, other? ________
11. Is the minister black, Puerto Rican, other? ________
12. How often do you use Spanish? ________
13. How good is your Spanish, i.e. can you talk about anything you want in Spanish? ________
14. How old were you when you learned Spanish, English? Which did you learn first? ________
15. Do you ever spend much time with people who just came to New York from Puerto Rico? ________

16. What language do you use with your parents? __________

with your brothers/sisters? __________

with your grandparents and relatives? __________

with your girlfriend? __________

with your friends? __________

in the street with people you don't know well? __________

with neighbors who are older? __________

with neighbors who are younger? __________

in neighborhood stores? __________

with your teachers? __________

with your minister? __________

when you make jokes? __________

at a dance? __________

when you are angry? __________

on the subway/bus? __________

17. Is there anyone you speak only Spanish to? __________

18. Do you ever help people out by speaking English for them because they can't? __________

19. When you're not in school, which do you spend most of your time doing?

___ just hanging out and rapping with friends

___ at home with your parents

___ at home watching TV

___ at home reading

___ at a club or center

___ at the movies

___ at your girlfriend's house

___ playing sports

___ alone at home

___ alone on the street

20. Is there any difference between the way Puerto Ricans and blacks talk? If so, what?

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